AMERICAN MILK REVIEW

VOL. 7 No. 4 APRIL, 1945

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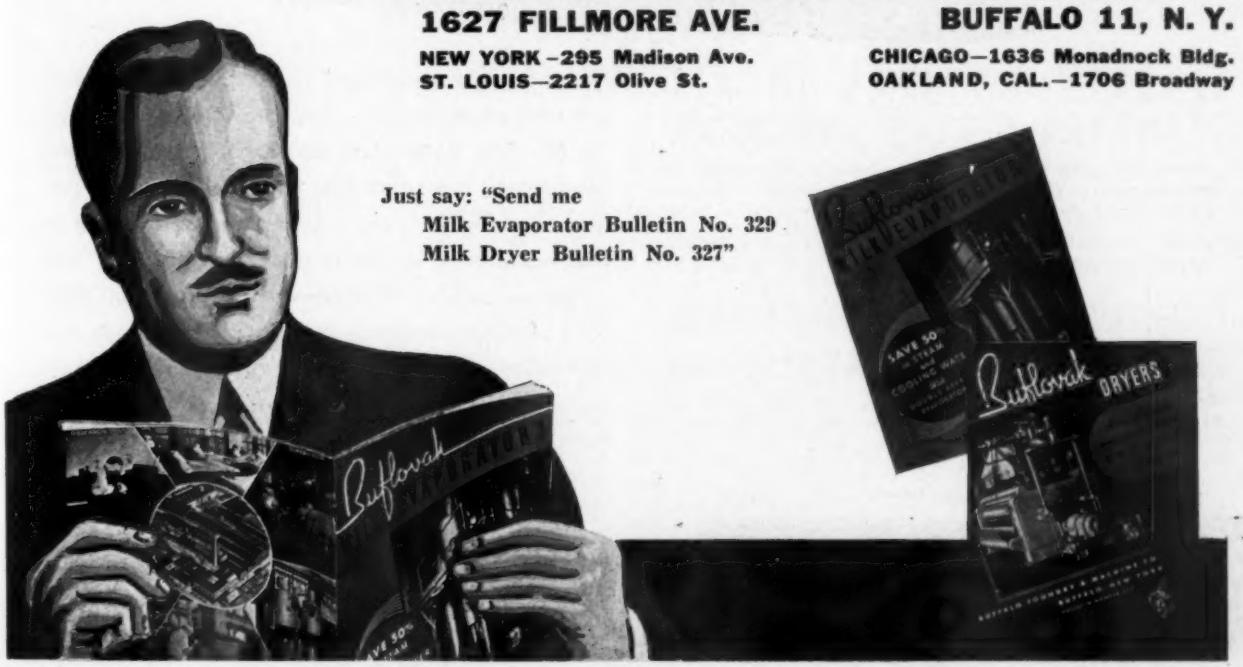

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AMERICAN MILK REVIEW

Volume 7 NEW YORK, APRIL, 1945 No. 4

Dairy Supply Outlook Viewed

WFA Expects Spring Civilian Use Volume to Show Little Change With War Demands Absorbing Major Part of Flush Season Production

WASHINGTON, D. C.—About the same volume of butter and other major manufactured dairy products is expected to be available for civilian use during the April-May-June period as in the first quarter of the current year, according to an April 4th analysis issued by the War Food Administration in announcing coming allocations of the dairy products group.

Fluid milk, cream, cottage cheese and ice cream are set for the usual seasonal increase as far as the quantity to be utilized in civilian outlets is concerned. WFA points out that these dairy items are not formally divided up in allocations between those various groups who share in America's food production, since in the case of all of these products the bulk is consumed domestically.

Butter supplies for the home front may be slightly smaller during the second quarter of 1945 than during the first, WFA expects. The new allocation is 323,000,000 pounds against an estimated consumption of from 325,000,000 to 328,000,000 pounds during January-March. The April-June allocation would permit average consumption at the rate of about 2½ pounds per person for the three-month period.

Factors in Butter Picture

WFA officials said that the small decline in civilian supplies during a period of seasonally increasing butter production may be traced to two factors:

(1) Butter production this spring, while higher than during the winter months, will not be as high as usual for this time of the year. It is estimated that creamery butter production for the year will be smaller than production in 1944—although total dairy production will be slightly higher.

(2) Of the smaller quantity that will be produced, war agencies (principally United States military) must take a larger share. Government purchases of butter for war uses in 1945 may be as much as 130,000,000 pounds larger than in 1944, in part because the Government has no backlog stocks to draw on this year, in contrast to the situation during the first months of 1944.

War requirements for other dairy products also are higher this year than last, but since production of these commodities also is rising, civilian supplies can more nearly be maintained, WFA believes.

Of the 161,600,000 pounds of butter scheduled for non-civilian delivery during the second quarter, 152,800,000 pounds are for United States military and war services. The remaining 8,800,000 pounds are divided between Russia (5,000,000 pounds); the Red Cross (700,000 pounds); United States Territories—Hawaii, Alaska, Puerto Rico, Virgin Islands—(2,400,000 pounds) and about 700,000 pounds for minor lend-lease and commercial shipments.

As to Evaporated Milk

Supplies of evaporated milk for civilians will be about the same during April-June as for January-March, says WFA. The allocation is 435,000,000 pounds (10,000,000 cases). However, it is estimated that civilians have been consuming more than they were allocated for this quarter. If civilian supplies are held to the allocation for the second quarter, the quantity available for use may be slightly smaller than in the three months just past.

United States military and war services will get the major share of the non-civilian allocation—about 654,000,000 pounds. This figure does not include requirements for relief feeding by the Army. Liberated areas have been allocated a total of about 22,500,000 pounds, most of which will be distributed by military agencies.

Countries receiving lend-lease supplies from the United States have been allocated about 72,500,000 pounds. United States Territories will receive nearly 18,500,000 pounds and about 10,000,000 pounds will be exported to various countries on a commercial basis.

Condensed Milk and Cheese

More condensed milk has been allocated for civilians for the next three months as compared with the last three. A seasonal increase in the production of bulk condensed milk raises the allocation to 67,300,000 pounds for April-June, from the 47,000,000 pounds allocated for January-March.

The non-civilian allocation of condensed milk for April-June is about 8,000,000 pounds less than the January-March allocation of 38,000,000 pounds.

Supplies of Cheddar cheese for civilians will be approximately the same during April-June as during January-March, the WFA expects. The allocation for the second quarter totals 107,000,000 pounds, compared with 106,800,000 pounds for the first quarter.

Of a total of non-civilian Cheddar cheese allocation (for the second quarter) nearly 117,000,000 pounds, United States military and war services have been allocated approximately 55,000,000 pounds; the United Kingdom, about 42,500,000 pounds; Russia, about 8,500,000 pounds; with the remainder going for other lend-lease use to United States territories, for the Red Cross and minor commercial shipments.

Civilian supplies of other cheeses also remain the same—53,000,000 pounds per quarter. The home front gets practically the entire production. Only about a million pounds of cheese other than Cheddar is purchased for non-civilian requirements.

Dried Whole Milk

The allocation of dried whole milk for civilians continues at 7,500,000 pounds per quarter, but because of rapidly in-

creasing war requirements, civilian supplies of non-fat dry milk solids during the next three months will be smaller than for the past three.

The non-civilian allocation of dried whole milk is seasonally higher for April-June than for the previous three months. A total of 71,800,000 pounds has been allocated for U. S. military and export programs, compared with an allocation of about 48,000,000 pounds for the first quarter.

Allocations of non-fat dry milk solids to non-civilian claimants are a little higher for the April-June quarter than for the January-March period. While the spray non-fat powder allocation at about 55,000,000 pounds is almost double that of the first quarter, the roller non-fat milk powder allocation at 72,600,000 pounds is down about 11,000,000 pounds. This reduction is explained by the fact that the January-March allocation included sizable shipments of government stocks.

BUTTER HELD AT 24 POINTS

Office of Price Administration officials released from Washington March 28 the new ration point value schedule for meats, fats and oils covering the period April 1 to April 28. In the fats group butter, as expected, continues at 24 points per pounds while oleomargarine rises 3 points from 5 to 8, and lard, shortening, salad and cooking oils rise 2 points from 4 to 6.

Estimated allocations for civilian use in April are given as 80,000,000 lbs. of creamery butter against 84,000,000 lbs. in March, while farm or country butter is expected to reach 26,000,000 lbs. against 23,000,000 lbs. in March. Oleomargarine April civilian supplies are expected to be 40,800,000 lbs. against 51,600,000 lbs. in March.

Butter industry members and groups in general hailed the OPA's decision to hold now to a 24-point value. E. W. Brockenbrough, Chief of the Fats, Oils and Dairy Products Branch of the Food Rationing Division, let it be known that it was the Branch's feeling that only harm could result from a lowering of the point level at this time.

Closer recent balance between sharply curtailed consumer demand and vastly cut civilian supply has just about killed the black market.

REFUSE DEALERS' PLEA

Washington, D. C.—The petition of milk dealers in the Cincinnati market for special payments to offset a 25c increase in the prices that they must pay producers has been denied by the War Food Administration. Officials stated that it has been determined by the OPA that such payments are not justified.

Continue Quota Plan

WFA to Maintain Sales Limitation Program on Fluid Milk and Cream During Flush Season

Washington, D. C.—Growing war requirements for all major manufactured dairy products and continued tight supplies of butter, cheese and evaporated milk for civilian use make it necessary to continue limitations on sale of fluid milk and cream even during spring and summer months of peak milk production, the War Food Administration announced April 4. Unanimous approval of this decision was voiced by representatives of milk producers and handlers at a recent meeting of National Fluid Milk Industry Advisory Committee here.

Following discussion of all phases of wartime dairy program, WFA urged that industry do everything possible to channel seasonally increasing milk production to dairy manufacturing plants.

It was pointed out that fluid milk and cream sales to civilians already are at an all-time high and that further increases would only decrease civilian supplies of such manufactured dairy products as creamery butter, cheese and evaporated milk. WFA especially requested fluid milk dealers to forego sales promotion campaigns so that they might have no difficulty in remaining within present sales quotas.

Regional Agents May Act

Recognizing that as usual the spring flush in milk production in some areas may exceed the quantity which local manufacturing plants can handle, however, WFA has authorized all local administrators of the milk conservation program to permit such increases in sales quotas on milk by-products (buttermilk, flavored milk drinks, etc.) as may be necessary to assure full utilization of skimmilk from which these products are made. Sales restrictions on cottage cheese were removed in October 1944.

In addition, where necessary to prevent waste, market agents may temporarily increase fluid milk sales quotas and also make limited adjustments in cream sales quotas for May and June only.

During these two months, market agents have authority to permit as much butterfat to be sold in cream as was sold in June, 1943. Use of butterfat in cream in most of 138 Metropolitan areas which are covered by WFO 79, the milk conservation order, currently is limited to 90 per cent of quantity sold in cream in that month.

Cautions Administrators

In granting this authority, WFA cautioned its agents to increase quotas only when sufficient manufacturing outlets for milk are not available and liberalized use of milk in fluid is necessary to assure full utilization of seasonally large production.

In explaining why sales quotas must be strictly observed, WFA stated that war needs for all dairy products in 1945 will require about 21 billion pounds of milk out of total production which the nation's dairy farmers may push to a record 120 billion pounds. Fluid milk and cream consumption by civilians probably will take about 55 billion pounds of the balance, or more than 10 billion pounds more milk than was consumed in fluid form in pre-war years.

Thus, says WFA, only about 44 billion pounds will be left for all other dairy products and other milk uses, as compared with about 63 billion pounds used this way in pre-war years.

NO REDUCTION NEEDED

The New York City Board of Health has joined its weight with the opposition to the proposed reduction in the farm price of manufacturing cream in the New York milkshed. The board's action was made known March 15 after Dr. C. J. Blanford, administrator of the New York metropolitan milk marketing area, relayed to the War Food Administration the text of a resolution the board has adopted.

"There is no evidence to convince the Board that there should be any request for market order reduction of the price of such cream at this time," the resolution declared.

With the tentative approval of the WFA, the reduction was proposed as an amendment to the New York federal-state marketing orders after a series of hearings last fall. The opposition to the proposal, largely consisting of producer organizations, has estimated that the resulting shrinkage in farm income would cost dairy farmers $700,000.

Editorially Speaking....

Milk-Hungry Millions

YOUNG MEN and women now serving in the Armed Forces in faraway parts of the world naturally develop cravings for certain foods to which, in liberal quantities, they were accustomed when they were back home. It seems that their yearnings become intensified almost in direct proportion to the time that they serve in distant lands, if expressions voiced in many of their letters be any criterion.

Among their acquired hankerings good fresh milk seems to be one of the top ranking commodities most universally desired by those presently occupied in the Armed Services. While they may be served with the evaporated or dried product containing essentially all of the nutritional elements of fluid, neither seemingly satisfies their desires for milk in the fresh form.

Evidence of this long-developed milk hunger is freely witnessed when service men and women return to this country on leave or furlough, or to be treated for wounds. It is no uncommon sight to see them flock to milk bars, fountains and mess-halls to drink glass after glass of milk at a single sitting. Such a scene is portrayed on the front cover of this issue of the "Review", showing a group of newly-returned wounded servicemen dispensing with the formality of drinking milk from a glass, but instead pouring it down by the bottle, the quicker and the better to deal with that craving which for so long was not satisfied.

While it is unfortunate that so many of our service men and women, when on duty on our far-flung fronts, are unable to obtain milk and dairy foods in the quantity desired, it is gratifying indeed to know that a full measure of these invigorating and health-giving products is available to them when they return. And in dairy industry planning for the future, recognition must be given to the fact that these returning veterans represent a vast potential as much heavier peacetime consumers when war and related governmental demands will not be the factors in the dairy economy that they are today.

When these milk-hungry millions of servicemen and women return we may well expect a domestic demand for fluid milk on a scale that has never been experienced heretofore, — assuming of course that employment and national income can be maintained at a relatively high level.

Tax Exempt Bonds Will Help

ON OTHER PAGES of this issue of the "Review" there are presented carefully studied considerations by Professor L. C. Thomsen of the University of Wisconsin on the subject "Coming Changes in Dairy Equipment and Operating Methods". Professor Thomsen has gone into this question from the standpoint of mechanical developments in relation to costs of operation and quality, and in addition suggests ways and means for financing new construction and purchasing new equipment.

In regard to financing the improved post-war plant, the author explains that there will be need for additional capital investments in order to increase the reliability of the installation and secure greater operating efficiency. He recommends the creation *now* of reserves through government bonds so that purchases of new machinery and better plants may be made possible.

In conclusion Professor Thomsen suggests for this purpose the issuance of government tax-exempt bonds at a somewhat higher rate of interest than the present issues, which would be redeemable with interest only when used for plant construction or modernization, or for new equipment.

This proposal appears to be fundamentally sound in setting up a program to develop that degree of improvement in plant planning and construction, and continuing machinery and equipment modernization, to an extent necessary to permit the country's dairy industry to keep pace with the tremendous technological developments which the war has so sharply accelerated.

Improving Dairy Efficiency

STATING THAT further improvement in the quality of hay and pasture in the region is generally accepted as being essential to low-cost milk production, the Committee on Production Efficiency of the Northeastern Dairy Conference gives in a recent survey a broad appraisal of the progress that has been made in production efficiency in the northeast. The committee points out a continued trend toward larger herds and the use of more milking machines and other equipment to increase the efficiency of labor on dairy farms.

The report was prepared by a committee headed by L. C. Cunningham, Extension Professor of Farm Management, New York State College of Agriculture, Ithaca. Other members of the committee, which presented its report to a meeting of the Conference board of directors, are: Dr. Kenneth L. Turk, Professor of Animal Husbandry, New York State College of Agriculture, Ithaca; Floyd J. Arnold, Extension Dairyman, University of Maryland, College Park, Md.; J. B. R. Dickey, Extension Agronomist, Pennsylvania State College, State College, Pa.; J. R. Graham, Chairman, State AAA Committee, Durham, N. H.; G. M. Worrilow, Extension Economist, University of Delaware, Newark, Del.; C. B. Bender, Professor of Dairy Husbandry, College of Agriculture, New Brunswick, N. J;. Mason H. Campbell, Dean, R. I. State College, Kingston, R. I.; E. H. Bancroft, Granite City Co-operative, Barre, Vt.

The report states that 60 to 70 per cent of the nutrients necessary for maximum milk production can be furnished by high quality roughage, a fact too often disregarded by dairymen who are conscious only of the nutrients supplied by purchased grains. The nutrients in roughage can be produced cheaper than grain, and cows will eat more of it if available, providing it is high quality and palatable.

"Emphasis on production, harvesting and preservation of pasture and hay points the way to greater economies in

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milk production and the growth of herd replacements," says the report. "The average dairy cow is not fed to her capacity to consume and utilize economically. Cows will utilize larger amounts of feeds if well grown and the feeds are of good quality.

* * *

"CONTRARY to common beliefs," the report continues, "dairy cattle are fed more poorly during the summer grazing season than at any other season. Too much dependence is placed on permanent pastures with little provision for supplemental feeding or supplemental grazing crops during mid-summer when permanent pastures are dormant. Regularity in feeding and management procedures is practiced on a relatively small percentage of farms. Cows are treated roughly and help is often improperly trained in milking and management technique."

Stating that the average useful life span of dairy cows is entirely too short for efficient milk production, the report declares that since the cost of raising replacements is high, it is obvious that greater longevity with more lactations will improve efficiency in milk production. All studies, according to the report, show high producing cows to be more economical milk producers, and that therefore culling of low producing cows is one of the first and most important steps in raising the average production per cow. The report discloses that 300,000, or nine per cent, of the dairy cows in the northeast are discarded annually because of disease, and calls for greater effort to wipe out bovine diseases.

Citing various studies of labor efficiency, the survey says that dairy farmers can still do much to improve efficiency by the proper use of machinery and planning their operations to reduce the time and energy spent in caring for cows.

Listing outstanding problems, the report says further improvement in the quality of hay and pasture are essential to low-cost milk production. The educational job of changing the feeding and management practices is only well begun, and more dairymen need to follow improved practices in raising heifers, conditioning dry cows, managed milking and making maximum use of hay, pasture and supplemental grazing crops. Better bulls is a fundamental problem, it is pointed out, and probably in no other phase of dairying is more research needed than in herd health and sanitation.

Benefits of Electrification

W. D. HEMKER, manager of the Westinghouse Rural Electrification Division, in a recent bulletin pointing out benefits and advantages to be gained through greater use of electricity on the farm, made the following significant statement: "The farmer realizes that his labor and that of his family is worth money, just as much as if he were paid by the hour instead of by the bushel or gallon. When a farmer finds a way of saving 18 hours during a busy season, such as harvesting, he knows every one of those hours means a better harvest and more money. With wartime labor shortage on the farm, those hours saved through the use of electricity are giving him something that is almost impossible to get."

In the field of dairying especially, there is a vast potential market for rural electrification and the many varied appurtenances that go with it. To mention but a few ways through which electricity may be more widely used on dairy farms, we may cite electrically-operated milking machines, mechanical milk coolers, electric deep well pumps, ensilage cutters and silo fillers, and electrically-run feed grinders.

From investigations already made three definite advantages are derived from the wider use of electricity on the farm: (1) Man hours of labor are reduced; (2) quality of farm products, especially milk, is improved; and (3) costs of production are decreased.

Unquestionably, as rural electrification and electrically-operated dairy farm appliances become more readily available, they will find wider application in the dairy field and should be definitely instrumental in attaining further progress along the road to better quality and reduced costs in production.

HALLAWELL WITH MARWYN

Chicago, Ill.—The appointment of G. C. Hallawell as general manager of the Marwyn Dairy Products Corporation of this city has been announced by Mark H. Fox, president.

Mr. Hallawell, has been with the Golden State Company, Ltd., for the past thirteen years, is well known in trade circles on the Pacific Coast and in the Middlewest. In his new connection he will supervise the production and distribution of Marwyn's full line of dairy products.

Headquarters of the Marwyn organization are at 141 West Jackson Blvd. here.

GEORGE E. FOOTE PROMOTED

George E. Foote, a salesman for the past eight years in the Boston territory for Cherry-Burrell Corporation has recently been appointed assistant branch manager of the corporation's Syracuse office.

Mr. Foote brings to his new position considerable experience in sales and engineering work in dairy products plants. During his undergraduate days at Middlebury College, Mr. Foote was a member of the honor society, a campus leader and an outstanding member of the varsity hockey, baseball and football teams.

REJOINS LIBERTY GLASS

Lieut. Peterson Resumes Sales Work With Bottle Firm

After fighting for two years with the armed forces of the United States, Lt. C .L. Peterson is again working for Liberty Glass Company. The young tank destroyer officer has been placed on the Inactive Reserved Officers Status because of a punctured ear-drum and infection received while in combat training, and has assumed his former position with the Sales Department of the company, again covering the Houston, Texas, territory.

Lt. C. L. Peterson

J. P. "Joe" Bain, who has been headquartered at Houston, has been made branch manager of the Minneapolis, Minn., territory and is being moved there to fill a vacancy created by the resignation of S. H. Newby, former Liberty representative in the Minneapolis territory.

VERDICT SET ASIDE

Wausau, Wis.—The verdict of a federal court jury here which had absolved the Sand Creek Creamery Co. of OPA charges of selling roller process dried whole milk powder at above ceiling prices, has been set aside by Judge Patrick T. Stone of the western Wisconsin. He ordered that the case be retried.

Judge Stone declared that the verdict was contrary to the overwhelming evidence submitted during the five-day trial of the case which was decided in favor of the defendant company by the jury.

WHIPPED CREAM IN CHINA

American Red Cross girls in China have discovered a way to whip canned milk, so the men visiting Red Cross clubs staffed by them can have whipped cream in cocoa or on cake. Cans of milk are placed in boiling water for 10 minutes, after which they are plunged into a pail of cold water to chill them. The contents are then poured into a cold bowl, and beaten with a wire fluffer. Often orange or lemon sauce is whipped into the fluffy cream to add variety to topping for cake.

How to use the mail to sell Vitamin D Milk

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You can depend upon the mail to carry your Vitamin D Milk sales story, to help convert your customers to Vitamin D Milk . . . effectively, authoritatively, economically.

Here is a new, novel, unique way to do the job—use Reply-O letters. They tell your customers the benefits of Vitamin D Milk to them and to their families and *make it easy for them to buy*. All your customer has to do is mail the handy reply card. She doesn't even have to sign her name and address—the address on the card acts as her signature.

Because Reply-O letters are so different, and so effective, we are now making available to all our customers a six-letter series. Two letters feature Homogenized Vitamin D Milk, four stress the importance of Vitamin D and can be used for either homogenized or regular Vitamin D Milk.

SAVE ROUTEMAN'S TIME

After your customer has received two, three or more letters from you—one each week for as many weeks as *you* choose—much of your route salesman's time has been saved. The letters educate your customer on the value of your Vitamin D Milk. Your routeman will find he can do a more effective and quicker sales job as a result of the previous selling job done by the Reply-O letters.

Your entire conversion program will be greatly aided if you adopt the mail plan . . . *because all details will be handled for you.* All you do is send us your customer list which will be safeguarded and returned to you promptly. You don't have to do any of the work in your organization.

YOUR NAME IS FEATURED!

You can obtain Reply-O letters for as little as 5c a mailing. Minimum quantity is 200 letters each mailing, at 7c per letter each. *Special note!* Your name and your name alone appears on each letter—your name and your name alone appears on the business reply card. The whole mailing is exclusively yours. The General Mills name doesn't appear anywhere.

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Special Commodities Division

80 Broad Street, New York 4, N. Y.

Minneapolis 15, Minnesota

To Submit Amendments

Proposed Changes in New York City Area Milk Order Now Ready for Referendum by Producers

Washington, D. C.—The War Food Administration will submit proposed amendments to the federal order regulating milk marketing in the New York metropolitan area, to a producer referendum within a few days. Ballots will be distributed to dairy farmers in the six-state milkshed by the administrator of the New York order. At the same time, a tentatively approved marketing agreement embodying the suggested changes in the order, will be offered for signature to dealers in the area.

The proposed amendments were drawn up by WFA following several public hearings on the order and after consideration of exceptions filed to preliminary amendments by the industry. They are primarily of a technical nature. Decision on controversial proposals relating to the price of Class 2-B (storage cream and plain condensed) milk and Class 3 milk (used in making evaporated milk and milk powders) has been postponed pending further study and analysis of the testimony given at the hearings.

The amendments currently being submitted to the industry provide:

(1) That the butterfat differential to producers be changed from the flat rate of 4 cents to a weighted average of class price butterfat differentials. This would mean that the butterfat differential to farmers would vary somewhat from month to month, but, on the basis of the present class prices and class differentials, would be somewhat higher than the present flat price.

(2) A new method for determining which milk plants in the New York area are to participate in the market-wide equalization pool provided for in the order. Under the proposed plan, the milk in "pool plants" would constitute the total supply of milk produced for the market, including both the milk which is actually shipped to the market and the reserve supply. Thus, pool plants would be those designated as such by the War Food Administrator and would include those designated as reserve plants and also those automatically designated by reason of shipping specified minimum amounts of fluid milk to the marketing area.

(3) That the provisions governing the basis on which milk is classified be expanded and clarified, particularly with respect to the plant at which milk is to be classified.

(4) For issuance by the market administrator (with approval of the War Food Administrator) of rules and regulations governing accounting procedure, including conversion factors, allowances for plant loss, and product definitions not included in the order.

(5) That the definition of Class 3 milk be revised to include ice cream powder. This product is not now classified under the order, except by interpretation.

(6) Minor changes to facilitate administration.

The exact date of the referendum has not yet been set.

NO CHANGE IN M-200

Washington, D. C.—Because of acute shortages om material and manpower in manufacturing plants concerned, no change in Conservation Order M-200 governing manufacture of fluid milk shipping containers can be made in the near future, War Production Board officials told a recent meeting of the Fluid Milk Shipping Containers Industry Advisory Committee. Committee members said that if can specifications in the order were revised, about 60 days would be required to obtain materials for the new set-up..

Current production of fluid milk shipping cans is being limited by lack of mapower, the industry advisory committee members said. While the supply of these cans is not expected to be critical, the situation will be very tight, they predicted.

Ohio Dairy Scientist

Prof. R. B. Stoltz, head of the Department of Dairy Technology, Ohio State University at Columbus and prominent in that state's dairy industry circles, whose consideration of methods of determining bottle trippage and costs, featured elsewhere in this issue of the "Review", will prove of interest and value to the milk distributing trade.

The abstract of Prof. Stoltz's discussion was made from a paper prepared for presentation at the Dairy Technology Conference planned for mid-February at Ohio State but which had to be cancelled because of wartime restriction of such sessions.

Cheese Points Cut

Cheddar Group Down 2 in Rearranged Rationing Set-up Issued by OPA for April 1 to 28 Period

April period announcement came from Washington March 28 that the OPA Rationing Division had regrouped many of the various cheese items and revised point values somewhat for the period April 1 to April 28.

Point level of former Group 1 types (Cheddar, Colby, washed or soaked curd and whole or skimmilk cheeses of these types, together with all products containing 30 per cent or more of the above types cheese) drop from 12 to 10 points per pound. Removed from former Group 3 and placed in Group 1 are Swiss, Brick, Munster, Edam, Gouda, Monterey and the Italian group such as Provolone, Parmesan, Romano, etc., but the point value of these remains unchanged at 10.

Group 2 cheese (cream, Neufchatel and creamed cottage cheese) continue at 6 points.

Group 3 now includes any cheese item of more than 10 per cent butterfat not included in Groups 1 and 2, with a point value of 8, while a new Group 4 has been added comprising all other cheeses ,which would include such items as skimmilk cheese of less than 10 per cent butterfat by weight) on which point value has been placed at 4.

Trade point values for the April period are 9.8 for the major part of Group I and 9.9 for products containing 30 per cent or more of the Group 1 types; 5.9 for Group II; 7.8 for Group III; and 3.0 for Group IV.

OPA and WFA officials estimate the total quantity of cheese of all types to be available in April as 56,000,000 lbs. against an estimate of 52,000,000 lbs. in March. Of the April estimate Group 1 is expected to total 48,300,000 lbs., Group 2, 5,000,000 lbs., Group 3, 1,800,-000 lbs. and Group 4, 900,000 lbs.

In the New York area the market situation continues very firm at full ceilings in all legitimate channels with supplies short of needs. Processed goods forms the great bulk of the supply for civilian use with extremely limited quantities of natural Cheddar or domestic Swiss available.

R. A. JOHNSTON ADDITIONS

Garland E. Elliott and Everett Wm. Dibble, Jr. have joined the Robert A. Johnston Company chocolate and cocoa division sales staff as additional representatives in the New York area, according to a recent announcement made by William G. Manschot, division sales manager.

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Coming Changes in
DAIRY EQUIPMENT
and Operating Methods

L. C. Thomsen, Associate Professor of Dairy Industry, University of Wisconsin, Discusses the Post-war Milk Plant and Its Processing Machinery

At the recent North Dakota Dairy Manufacturers' Conference at Fargo, Professor Thomsen, well known University of Wisconsin dairy scientist, delivered three interesting addresses on several aspects of wartime and post-war dairy processing plant operational conditions and trends. Among these was the following paper on coming changes in dairy equipment and methods to which the industry will have to adjust itself, and an appraisal of their general significance.

Due to the timeliness of this discussion and its importance to the dairy industry generally, the "Review" is pleased to present herewith in full the text of Professor Thomsen's consideration of the subject.

Of the two remaining addresses given by him at Fargo, one dealing with continued diversification in the manufacture of dairy products in the post-war period was printed in the March issue of *American Butter Review*. The other will appear in a later issue of one of the Urner-Barry Company dairy publications.

IF WE ACCEPT as a truism the oft quoted phrase that "history repeats itself," we are due for some revolutionary changes in dairy plant equipment and methods, just as we had them following the last world war. Some are here and in use, others merely await the release of critical materials, and still more will be developed. Wars have always stimulated thought, and scientific inventions. The ideas thus developed will find application in peace time industry, and our industry is no exception.

We are a branch of the food industry of this nation. Let us pause for a moment and trace our development. Nearly 200 years after the establishment of the first permanent white settlement in this country, and shortly after we became an independent nation, it required the back-breaking energy of 90 per cent of our population to produce and process sufficient food for itself and the remaining 10 per cent. Less than 150 years later it is possible for 23 per cent of our population to provide all the food necessary to keep more than 130,000,000 people better fed than those of any other nation, and in addition supply 25 per cent of its total food output to our armed forces and our allies.

Prof. L. C. Thomsen

Thus it would appear that after this war less than 20 per cent of our population will make its living in the food industry unless we become a food exporting nation. In the early years of the last century approximately 65 man hours of work were required to raise one acre of wheat. Now this is accomplished with 2½ man hours. In the world today there are great masses of people where 90 per cent of the population is engaged in food production, and starvation is a common occurrence unless masses of food are imported.

Mechanical Power and Machinery

Why are we now able to accomplish with such small percentage of our population what we could not do 150 years ago and what some nations are unable to do even now?

One answer is mechanical power and the other is improved machinery and science. In 1800 the only available mechanical power of any significance for land use was the wind mill and the old mill stream, neither of which was mobile. At present the mechanical power output in the United States equals or even exceeds that of all the rest of the world. Our present power producing capacity (not including that which is used by our armed forces, or that which is installed in plants constructed solely for the production of war materials) is in the neighborhood of one and one quarter billion H.P.

If we accept the currently suggested post-war employment figure of 60,000,000 this represents a peace time availability of 21 H.P. per worker. Our present industrial usage per worker is 6 H.P. Thus we have now available a surplus of 15 H.P. per worker which may be used in such non-productive forms as pleasure automobiles, certain household appliances, pleasure water craft, hobby shops, etc., all of which help to make life worth living.

In connection with the production of power it might be well to point out that according to Ralph A. Sherman of The Batelle Memorial Institute there are but fourteen more years of known available oil supplies in this country if we continue to use them at the 1942 rate. We may still go on at the 1942 rate of consumption for 3830 years with our known coal reserves. These figures may have some bearing on the type of power we install in our new dairy plants. In regard to available power and investment per worker, the dairy industry occupies a fairly favorable position. For example, in general dairy plant operations the investment in equipment per worker equals or exceeds $6000 and the available power will be in the neighborhood of 8-9 H.P. In milk drying plants the corresponding

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figures range from $3000 to $6000 for equipment and from 3 to 6 H.P.

Average Investment Per Worker

At present the average investment in mechanical equipment per industrial worker in the U. S. is estimated at $6000. For the farmer the corresponding figure is placed at $3000, but is greater for the dairy farmer. Figures such as these coupled with our educational system with its freedom of thought are but a few of the reasons why the output per worker in this country is roughly double that of the English worker, three times that of the continental European, and six times that of the Russian worker. The output per worker in the dairy industry has not kept pace with that of the machine industry employee. The output per man hour is, however, greater than a decade or two ago. The dairy industry has not undertaken industrial engineering studies to any great extent. Much more will be accomplished in the post-war period.

Let us not lose sight of what happened to the acre of wheat in the last 100 years. What we have accomplished, others may. Most of our great wars have been the result of struggles for industrial supremacy. Progress in our age is far more rapid than it was 100 years ago. It used to require 50 to 100 years to prepare for a major war. We did it in less than one-tenth of that time.

In a recent magazine article in connection with our good neighbor policy Assistant Secretary of State Nelson A. Rockefeller pointed out that it should be our aim to help other countries increase their food production. Our part in this program is to supply the necessary machinery to bring about this increased production.

I would not be concerned with the increased food output, if it were absorbed by the countries producing it. What I am concerned about is the result on production costs when highly efficient machines are operated by low paid workers. The answer that mechanical industrialization will result in increased wages due to a higher standard of living is not convincing. We need merely point to Japan and Russia. Since it is necessary to eliminate trade barriers if we expect to sell the machines about which Mr. Rockefeller speaks, we needs must open our markets to the products of these machines, regardless of where they are used. That was one of Japan's major objectives for going to war.

Problems Facing Dairy Industry

Unfortunately not all of the dairy manufacturing enterprises of this country are preparing themselves for the post-war competition. The proposal that some modified form of a lend-lease policy be extended to nations in the post-war period, plus Mr. Rockefeller's statements, means that there will be made available to such other countries the most modern kind of equipment, and I mean specifically dairy equipment.

At this point I should like to list the problems that face the dairy industry. First, as previously pointed out, we may look for revolutionary changes in dairy equipment in the post-war period. Secondly, due to hard usage, inexperienced help, and lack of replacement, much of our equipment will be worn out at the end of the war. Thirdly, we shall be faced with increased operating costs in the post-war period due to higher wages and continued high taxes. This has been an inevitable result of every war. Fourthly, OPA price regulations have been such that the dairy industry in general, but the butter and cheese industry in particular, has been obliged to pay to the producer everything in excess of the bare operating expenses.

This was necessary in order to equal returns to farmers by competitive industries. This condition is serious for two reasons, namely (1) It has drained the industry of much needed reserves for post-war modernization, and (2) the subsidies, by whatever name, amount to nearly one third of the farmer's milk check. When they are eliminated after the war, the reduction in the returns to the dairy farmer will be so striking that the dairy plant will have to continue to pay out everything but the shoestring, and no money will be left over for new equipment or new construction.

A Look at the Future

At this point I should like to assume the role of "imagineer" (with apologies to the Aluminum Company of America) and consider what the dairy industry may wsih ot spend money for in the post-war period. Only little more than a listing of some of the items will be possible.

Our new or modernized building might include air conditioning. Certainly it will have to be provided with attractive, durable, and slip proof floors which are both acid and alkali resistant. If they are provided with joints, the same specifications apply, and in addition the jointing materials must have the same coefficient of expansion as the flooring materials, so that no mechanical crevices will develop. We shall look for sidewalls which are attractive, restful to the eyes and easy to keep clean. They must retain these qualities for years to come. Walls and ceilings must be insulated so as to avoid condensation at all times. We shall prefer natural lighting but without glare. If artificial light must be used, it must resemble daylight, must be non-flickering, and be economical. A wider choice of insulating materials will be available for the construction of refrigerators. All steel insulation is available.

If a refrigerator can be insulated efficiently with steel, competitive materials may be used equally well. When practical and desirable, transparent glass insulating panels made up of alternate layers of glass and air spaces may be inserted in a refrigerator wall. These panels are so constructed that condensation between layers of glass is impossible. Where bulk insulation is desired we may

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select all the way from wood or bark fibre through cork to spun glass.

Electric services—conduits and switch boxes—will have to be moisture and vermin proof.

The Battle of Materials

As to machinery, we may look forward to a battle of materials. At the end of the last world war we had our choice of tinned iron, tinned or untinned copper, galvanized iron, wood, some brass and some german silver. Then came prohibition, and the glass lined equipment people, who lost a great part of their market, entered the dairy field. In 1924 we were given stainless steel. In the early thirties aluminum entered the picture on a large scale. So did the nickel people with their product inconel. Now we have plastics and newer alloys.

Instead of paints or enamels on dairy equipment we may expect to see far greater use of metal spraying which will neither chip or tarnish. Permanent coloring of metals will lend variety to equipment as well as to walls and trimmings. Some of the structural materials will actually be lower in price than they were in the pre-war period. The use of new materials will not be without its problems. New cleansing and sterilizing agents will be required. But this is not too serious a problem, for it is in this field that we have made some of our greatest advances in recent years. At present 30 to 50 per cent of the labor in dairy plants is chargeable to cleaning operations. Newer washing compounds have and will continue to simplify and shorten these operations. Washing powders containing 10 to 25 per cent of poly phosphates such as tetra sodium pyrophosphate or sodium tetraphosphate, together with about 3.5 per cent of a good wetting agent such as one of the sulphonated alcohols, or acid salts of poly alkylene polyamine, will be found exceptionally effective under almost any water condition.

Trend Toward Continuous Operation

Occasional treatments with mild acid cleaners of either inorganic or organic origin will be very helpful for the removal of any milk stone accumulations which may occur. Where continuous operations are used cleaning operations are greatly simplified by use of circulating pumps. Most industries have come to the conclusion continuous operations permit of better control and result in lower labor costs. So it is logical for us to expect a greater trend toward continuous operation such as conveyors, continuous pasteurizing equipment, packaging equipment, etc.

New procedures for attaining our present product objective will necessitate the use of new equipment, as for example the continuous churning process, a continuous cheese making process, and new packaging methods and materials.

Increased output of certain dairy products naturally will necessitate changes in building construction, new equipment, and operational procedures. To name but a few:—butter oil, frozen milk, powdered whole milk, bottled evaporated milk, and new dairy spreads. All of these open new markets to plants located at considerable distances from metropolitan areas. They will bring outlying plants into direct competition with city milk plants. Greater emphasis will be required on quality milk production and on plant practices. We will see the introduction of vacuum pasteurization and cooling in order to reduce the oxygen content of the finished dairy product. Packaging by use of inert gases such as nitrogen will be expanded.

In conclusion, I should like to discuss briefly where the dairy industry stands with respect to its post-war problems with respect to equipment and methods, and possibly suggest one solution.

On the credit side of the ledger, we find, first, that many dairy plants which entered the war period with a mortgage on their plant and equipment have succeeded in liquidating such debts. That is a very hopeful situation. The reasons for this have been discussed. Secondly, the desire for modernization and the willingness to spend money for improvements exists. This was not the case prior to the war. The dairy industry has learned what other industries had discovered long ago, namely, that it is often good business practice to discard a fairly successful piece of equipment for an improvement. Thirdly, we find that large industrial organizations are willing to make available to anyone the results of research by their technical staff. An example is the recent series of articles in *Food Industries* on packaging and storing of dehydrated foods, by the research staff of the Continental Can Company.

The Question of Financing

On the debit side of the ledger, we find that few, if any, plants have made any attempt or succeeded in setting aside reserves for use in the post-war period. It is therefore pertinent to ask what resources a dairy plant should have available in order to carry out a modernization program. It must decide upon the amount and the cost of the equipment to be purchased and then apply some practical test to determine if the investment should be made. Capital investment may be made in order to increase reliability or to increase the efficiency of a plant.

The first pays no immediate cash dividends, but it may increase the equity of the investor or where it takes the form of equipment for improving the quality of the product or to reduce health hazards it creates good will. Increased efficiency as a result of capital investment pays tangible cash dividends or increases cash reserves. A dairy plant operator, in order to be classed financially successful, may be both idealistic and materialistic, or he may be an out and out materialist, and sell his business and move on when he has made all the money he can.

Industrial enterprises generally operate on the principle that capital investments

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in equipment should be returned by operating savings in from 3 to 5 years. In other words an investment of $2.50 to $4.00 must yield a yearly return of $1.00. Dairy plant operators apparently tend to lean toward the idealistic side, otherwise why should they want beautiful stainless steel exteriors on their dairy plant equipment.

Deciding on Investment

An illustration of the above method for deciding on a given investment might be the coming continuous churning process. In one of these systems the fat tests of the buttermilk are reported at less than .15 per cent as compared with .65 per cent in the conventional churn. In addition the amount of buttermilk is less. This would mean that in a creamery which manufactures approximately 1,000,000 pounds of butter the savings which might be effected as a result of lower fat losses in the buttermilk may approximate 10,000 pounds. At present prices this saving would represent roughly 33 1/3 per cent on $16,500. While we have no conception of the cost of continuous churning units, the figure just given might well represent the major share of the investment. In addition we may expect savings on labor, as well as more precise composition control.

The ultimate problems with which the management must concern itself are the ways and means for providing the funds to modernize the building and equipment in order that it may adequately meet post-war competition.

The Administration in Washington has proposed that depreciation rates be increased. The details have not been divulged. What one branch of the government says, and what another branch does apparently are two different things, for the Internal Revenue Department has recently decreased depreciation rates (Federal Register April 7, 1943, p. 4476, MPR 136, Amend. 76.) Furthermore, it is very doubtful if this proposal would be helpful. True, it would reduce excess profits taxes, and increase the surplus account, provided the savings were kept in reserve and used as a modernization or construction fund. What will happen after the equipment is fully depreciated? Or what will happen if the owner sells his equipment? How is he going to square himself with the Treasury Department? His taxes will take a sudden spurt in either event.

Plan for Creating Reserves

Presumably the Administration has in mind that the tax rate will be down by the time the equipment has been fully depreciated. But has it any justification to assume this? Our national debt has risen from 16 billion in 1930 to 232 billion in December, 1944, and at its present rate of increase it will reach 300 billion by December 1945. The interest burden on this will amount to approximately 6 billion dollars per year in addition to war resultant expenses and regular governmental expenses.

This wouldn't be America if we had no pet proposals of our own to solve our problems. I confess I am no exception to the rule. The proposal I would make is designed to give special encouragement to an industrial organization to set aside reserves for building construction or modernization, and for the purpose of purchasing new equipment. Such undertakings are essential and must be encouraged if we expect to give employment to 60,000,000 workers in the post-war period.

Briefly, I would suggest that the government issue tax exempt bonds at a somewhat higher rate of interest (say 3½ to 4 per cent) than the present issues, which would be redeemable with interest, only when used for construction, modernization, or for new equipment. No interest would be paid unless the principal and interest were used for the purpose indicated. If redeemed otherwise, only the principal would be recovered. Interest, compounded annually, would be paid only at the time of redemption for the purposes mentioned. The bonds would be fully negotiable, so that no hardship would be suffered by a holder who might find it impractical to use them. This proposal would have the double purpose of encouraging building reserves at this time, and it would encourage spending at a future date when it will give employment at a time when that is highly important. It would be necessary to maintain some federal agency which would establish priority ratings in order to inhibit inflationary tendencies.

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J. G. Cherry and C. A. Wood Elected to Board of Directors

At the recent annual stockholders meeting of Cherry-Burrell Corporation, two new directors were elected. Carl A. Wood, general sales manager, was elected a director and vice-president to fill the

Carl A. Wood

John G. Cherry

vacancy on the board caused by the death, last December, of E. W. Neumeister. Previous to his appointment as general sales manager a few years ago, Mr. Wood was manager of Cherry-Burrell's New York office which services the company's dairy trade customers in that area.

John G. Cherry, assistant general manager of production, and a son of H. H. Cherry, general manager of the corporation's Cedar Rapids factory, was elected to the board to fill the vacancy caused by the resignation of his uncle, H. T. Cherry.

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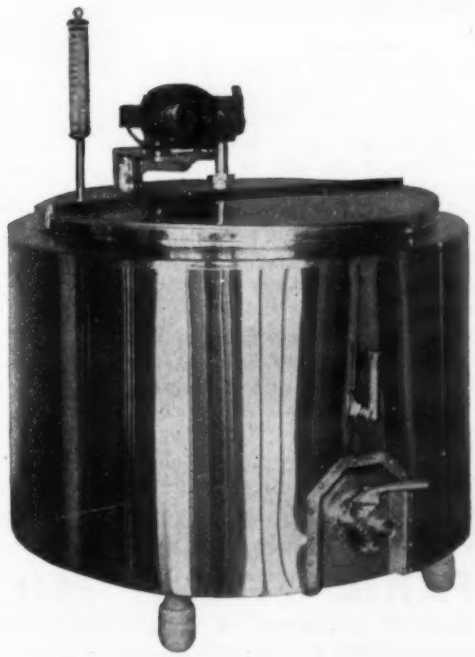

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Bottle Trippage and Costs

Prof. R. B. Stoltz of Ohio State University Details Procedures in Different Methods of Determining These Important Factors in Milk Plant Conduct

Among the many interesting considerations of various features of practical dairy industry operation prepared for presentation at the 1945 Dairy Technology Conference, which had been scheduled for February 12 to 16 at Columbus under the auspices of the Department of Dairy Technology of Ohio State University, was an interesting description of means of determining bottle trippage and costs by Prof. Stoltz, Head of the Department. The Ohio State Dairy Conference was cancelled to comply with federal restrictions on the holding of wartime meetings.

The "Review" gives herewith an abstract of Prof. Stoltz's paper on the subject which appeared in a full compendium of the various addresses which were to have been presented at the time of the session, put out by the Ohio State Dairy Technology Department.

THE STANDARD method of determining the trippage of your milk bottle is to make an inventory of the bottles on hand at the beginning of a period and at the end of a certain period. This inventory should include the bottles that you have in your warehouse, in your plant, and estimate the amount that you have among your customers. This estimate varies from three to seven bottles per unit sold.

For example, if you sell 10,000 units per day, then it requires from 30,000 to 70,000 bottles to be in the hands of your customers. The variation depends upon whether or not you deliver your milk daily, every-other-day, or three times or twice each week.

After you have determined the number of bottles that you have purchased or leased during the period studied, you then determine the number of bottles that you have filled. By dividing the total number of bottles filled by the number of bottles placed in use, it gives you the trippage for that particular period.

Most milk distributors put much more dependence upon their cost per thousand bottles filled than they do on their trippage. To find the cost you determine the cost of the bottles placed in use, add to this the cost for that certain period paid to the bottle exchange, then estimate the cost of labor in the plant in sorting bottles, add to this any other costs that may be connected to the bottle, subtract from this the receipts from cullet and bottle deposits, and this will give you the net cost of bottles for that period.

By dividing this net cost by the number of bottles filled for that same period, the cost per thousand bottles filled may be obtained. Given below is an example of how the bottle trippage and costs may be obtained.

Trippage Determined from Weight of Cullet

A newer method to determine trippage and breakage of bottles may be obtained by weighing all cullet at four different places in the plant. This may be done as follows:

A. *Keep a record for one week or more of*

(1) weight of bottles broken on returns and up to the washer;

(2) weight of bottles broken at the bottle washer;

(3) weight of bottles broken at the bottle filler;

(4) weight of bottles broken in cold storage;

(5) total weight of bottles broken in plant;

(6) weight of bottles not returned.

(7) total weight of bottles broken and bottles not returned.

(Please turn to Page 138)

Number bottles in plant—Jan. 1, 1944		43 gross
Number bottles in plant—Dec. 31, 1944		65 gross
Number bottles in plant—Over Jan., 1944		22 gross
Number bottles purchased during 1944		1,748 gross
Number new bottles used during 1944		1,726 gross
1,726 gross equivalent to 248,544 bottles.		
Cost of 248,544 bottles		$11,219.21
Bottle Exchange cost during 1944		4,351.70
Labor cost sorting bottles in plant		7,008.00
Total cost		$22,578.91
Sale of cullet	$102.00	
Received as deposit on bottles	203.52	
		305.52
Net cost of bottles		$22,273.39
Bottles filled (sales) during year		6,899,383

6,899,383 ÷ 248,544 = 27.75 trippage.

$22,273.39 ÷ 6,899,383 = $3.22 + cost per 1,000 bottles filled.

IF YOUR DAIRYMEN HAVE WILSON MILK COOLERS YOUR MILK PLANT WILL HAVE A UNIFORM SUPPLY OF

FARM—FRESH MILK

HIGH IN QUALITY • LOW IN BACTERIA

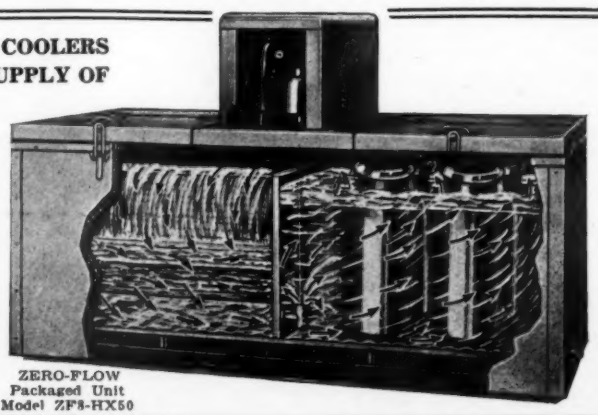
Wilson ZERO-FLOW Milk Cooler:

- **Cools TWO milkings Daily FAST . . . . with its patented flowing self-leveling water-bath "neck-high" on every can automatically during cooling.**
- **Stores ALL Cans of BOTH Milkings . . . . Automatic storage with no rehandling of cans.**

Complete information on WILSON SYSTEMS OF MILK-COOLING should be in your files. Let us send it NOW. Address Dept. 21.

WILSON CABINET COMPANY

Designers and Manufacturers of
COMMERCIAL REFRIGERATION EQUIPMENT
Smyrna Delaware



ZERO-FLOW
Packaged Unit
Model ZFS-HX50

SOLVAY
TRADE MARK REG. U. S. PAT. OFF.

ANCHOR ALKALI

Gives Bottle Washing Efficiency

At Lower Over-all Cost!

You can reduce bottle washing costs—yet have clean bottles come out of your washer sparkling-clean and sterile 100% of the time. It's easy with Solvay Anchor Alkali—PROVED scientifically efficient every day in dairy plants throughout the country.

Anchor Alkali gives high detergent action. This means you use *less* Anchor Alkali. It's in dustless flake form—dissolves completely, at least ⅓ times faster than most other alkalies—provides uniform strength—rinses free. Anchor Alkali also reduces scale formation and acts as a lubricant for the moving parts in the washer.

The sum of all its advantages makes Anchor Alkali the *lower cost* washing compound—and your assurance of maximum washing efficiency.

WRITE TODAY for complete folder which tells you how Anchor Alkali is used in dairy plants. Just fill in the coupon below:

for maximum
bottle washing efficiency . . .
maximum economy . . .
use Solvay Anchor Alkali

SOLVAY SALES CORPORATION, 40 Rector St., New York 6, N. Y.

Gentlemen: Kindly send me your complete folder describing Anchor Alkali for use in dairies.

Name.....

Affiliated with.....

Address.....

City..... *State*..... AW-4

Detroit Public Library

Using Our Separator

Items of Interest Skimmed From Here and There

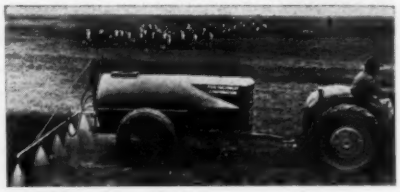
Power Sprayer

A VERSATILE power sprayer developed by Food Machinery Corporation is now helping to win a war against cattle grubs. These parasites have caused losses, estimated by the Department of Agriculture to amount to as much as $100,000,000 annually.

The power sprayer with a machine gun-like nozzle was successfully demonstrated recently on the Noble Ranch near Fresno, California.

Hereford bulls were herded into the chutes and spray material at between 250 and 400 pounds pressure at the nozzle of the spray gun was forced onto the backs of the animals. Spray passed through the hair, blew away the dirt, grease and scabs and penetrated down into the grub holes, killing the grubs.

The machine has many other uses on the ranch and farm. After the machine is emptied of insecticide and filled with water it becomes a standby fire department. It can also be used for whitewashing, for painting, for disinfecting, for fly control, for mosquito control, for weed killing, for spraying fruits and vegetables, and one of the most important and newest uses is for spraying dry grass or hay with molasses to make a food palatable for dairy cattle. With the paint gun attachment a dairyman can easily paint a barn of ordinary size in a few hours.



The same machine can be used by the farmer to spray his hog pens, his dairy barn and his outbuildings. By using Diesel oil, or other weed killer, the farmer can economically kill weeds and then, after emptying the machine and refilling with the proper disinfectant, he can attack and destroy fruit or vegetables pests.

During the dry season when cattle do not easily graze, he can whet their appetites and consequently increase their weight or their milk production by spraying the dry material with a mixture of water (33 1/3 by volume) and cane molasses.

Rubber Gloves

PUBLISHED by The B. F. Goodrich Company, Akron, Ohio, a new catalog section on its all-synthetic industrial rubber gloves and plastic treated aprons is now available upon request. Featured is a page devoted to illustrated instructions on how to get the most service at the lowest cost from acid and industrial rubber gloves.

Methods of manufacturing the gloves by the Anode process, which gives the same advantages with all-synthetic construction as when natural rubber was used, are described. A page also is devoted to the company's line of plastic treated industrial aprons.

Mastitis Teskit

TO GIVE AN IDEA of things to come The Rex Company of Burlington, Iowa, is currently distributing copies of an article on Bovine Mastitis written in an unusual and interesting fashion for farm reading to show just how important it is to guard against Mastitis and other infections in milking.

According to a recent announcement, The Rex Company states that up-to-date the method of testing for Mastitis has been either microscopically or with the use of Bromthymol Blue. Using

THE KEY TO QUALITY CONTROL...
from cow to consumer

LO-BAX
50% available chlorine

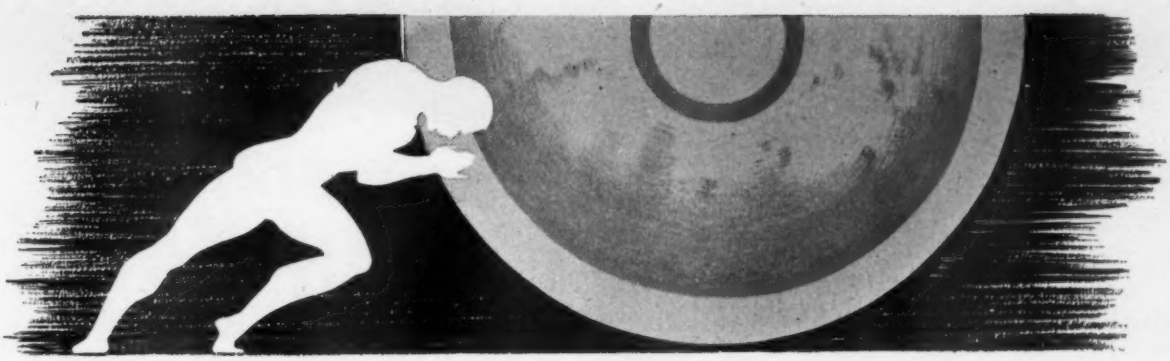
No finished dairy product can be of better quality than the raw material—milk—from which it is made. Hence quality control must begin on the farm—require just as exacting bacteria control as practiced in the plant.

Lo-Bax — the concentrated, fast-killing chlorine bactericide — will help assure you of consistently high-quality milk if used by *all* your producers. Let Mathieson assist in your quality improvement program by providing Lo-Bax milkhouse instruction cards, informative folders and other helpful material. Inquire for specimen copies or, if you prefer, tell us how many producers you have and we'll arrange for you to get enough copies to supply them. Write today.

Mathieson
LO-BAX
CHLORINE BACTERICIDE

THE MATHIESON ALKALI WORKS (INC.)
60 East 42nd St., New York 17, N. Y.

Lo-Bax . Super-Nufos . H T H-15 . Dry Ice . Carbonic Gas . Ammonia, Anhydrous & Aqua . Caustic Soda . Soda Ash . Bicarbonate of Soda . Liquid Chlorine . Bleaching Powder . PH-Plus . Synthetic Salt Cake . Sodium Chlorite Products
Sodium Methylate



OUR SHOULDER IS PUT TO YOUR WHEEL, SWIFTLY

Dairymen know too well how milk bottles can go A.W.O.L. in great numbers.

This winter bottle returns dropped to dangerously low levels. Transportation tie-ups and related difficulties blockaded quick replacement shipments.

Reports coming into Owens-Illinois revealed an acutely serious shortage of "empties" over a wide area. It became evident that every possible force needed be exerted to help increase milk bottle returns. So Owens-Illinois immedately tied-in its nationwide facilities with the efforts of local dairies—

SWIFTLY stories from the Owens-Illinois newswire service were heard from many radio stations . . .

SWIFTLY news stories and pictures provided by Owens-Illinois appeared in many papers . . .

SWIFTLY over the Owens-Illinois coast-to-coast radio program, from Fred Waring and his Pennsylvanians, there went an earnest appeal to its millions of listeners to return their milk bottles.

On following days, through following weeks, these facilities will continue to work for the Dairy industry.

We are happy that we have these established channels of swift communication to your customers that enable us to so quickly contribute to the solution of your immediate problems.

Send for your copy of this easy-to-use program. Then use it to ease your return bottle problem.

Enjoy a "Lift to Living" that is a "Lift to Selling" products packed in Duraglas Containers—Fred Waring and his Pennsylvanians, over the Blue Network from coast-to-coast every Thursday Evening—10 p.m. EWT—9 p.m. CWT—8 p.m. MWT 7 p.m. PWT.

Duraglas DAIRY CONTAINERS

OWENS-ILLINOIS GLASS COMPANY

TOLEDO 1, OHIO

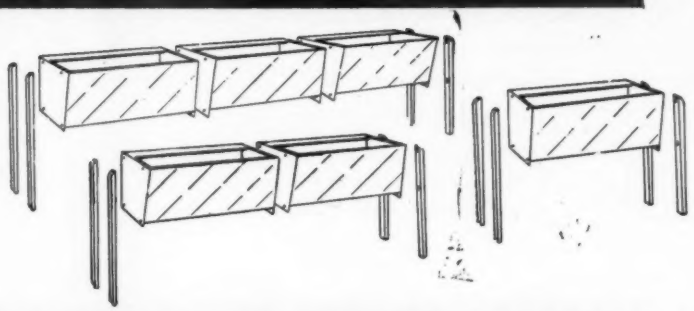
At Last! Something New in Wash Tanks-

The GIRTON WASH TANK WITH THE ADD-A-TANK FEATURE

The famous Girton Wash Tank is now made on a new principle. The dealer can now sell his tank customer just the tank he needs from a small in-stock inventory.

WHAT IS THE ADD-A-TANK PLAN OF SALE?

There are only 3 basic size tanks—24, 30 and 36 inches. These 3 sizes can be assembled into any combination of 19 different sizes, ranging from a single-compartment 24-inch tank up to a three-compartment 108-inch tank. The tanks come "knocked-down", giving a low freight rate. Assembling is a quick easy job. The dealer can assemble any size needed from a small inventory for quick delivery. The customer can add units as he needs them.



COMBINATIONS DESIGNED TO FIT EVERY FAMILY NEED AND PURSE

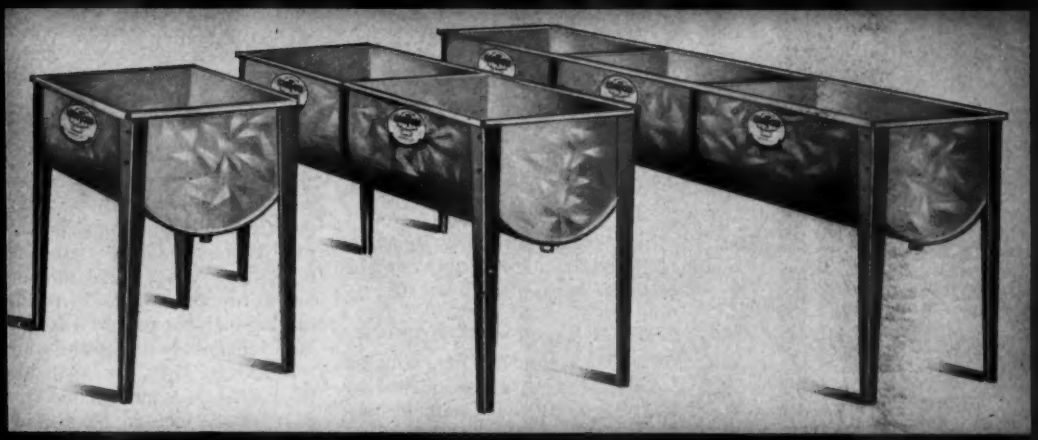
Illustrated are only three of the 19 possible size combinations. Assemble the sizes you need, bolt them together and put on the legs. It is as simple at that. But the manufacturing and delivery economies which result from this revolutionary idea have made possible a new low in tank prices, even in the face of rising production costs. The Boilerplate Tank, illustrated here, is the aristocrat of wash tanks. It is made of ⅛-inch galvanized boilerplate steel, electrically welded throughout.

WRITE FOR CATALOG

GIRTON MANUFACTURING COMPANY

MILLVILLE, PENNSYLVANIA

The Girton "Add-A-Tank" Package Unit!



Write For Catalog

The "Add-A-Tank" feature is also available in the famous Girton Roundbottom Wash Tank, the leader in the low price tank field. It is made of extra heavy gauge galvanized copper bearing steel. Made in 3 basic sizes—24, 30 and 36 inches, which are quickly assembled into 19 different sizes.

The tank is made of extra heavy gauge copper-bearing galvanized steel, with detachable angle iron legs. Available either with or without storage shelf. Inside dimensions: length 29 inches; width 16½ inches; depth 14 inches. Overall height 33 inches.

The GIRTON HANDY TANK and Electric Water Heater

The ideal all-purpose milk house and dairy combination. Provides modern facilities for real sanitation.

TIME-TESTED EQUIPMENT for MODERN DAIRY and FARM

LUBRIPLATE
No. 205

MAKE ONE BEARING OUTLIVE TWO

LUBRIPLATE No. 205 is a lubricant developed for use in grease type anti-friction bearings operating at speeds from 5000 RPM to 20,000 RPM. Users of high speed machinery tell us that this remarkable lubricant often more than doubles the life of bearings. For the lubrication of anti-friction bearings with oil type housings LUBRIPLATE No. 1 or No. 2 is recommended depending upon the operating speed.

Rx FOR YOUR MACHINERY

No. 3—Ideal for general oil type lubrication. Ring oiled bearings, wick feeds, sight feeds and bottle oilers.

No. 8—Because of its high film strength and long life reflects outstanding performance in most types of enclosed gears (speed reducers).

No. 107—One of the most popular grease type products for general application by pressure gun or cups.

No. 70—For a wide range of grease applications, especially at temperatures above 200 degrees F.

No. 130-AA—Known nationwide as the superior lubricant for open gears, heavy duty bearings, wire rope, etc.

BALL BEARING—This is the LUBRIPLATE lubricant that has achieved wide acclaim for use in the general run of ball and roller bearings operating at speeds to 5000 RPM and temperatures up to 300 degrees F.

Write for a booklet, "The LUBRIPLATE Film", written especially for your industry.

LUBRIPLATE

Bromthymol Blue, when the pH of the milk changes the disease is well advanced. With the Rex Mastitis Teskit not only the infection itself but also the degree of infection, whether mild, severe or chronic, is indicated.

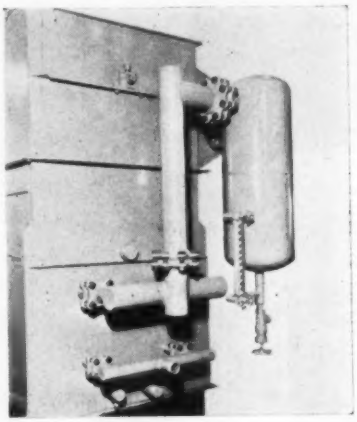
The company states further that all milk producers should have Teskits because the security of the herds depends largely on curing the infection by early determination of its presence.

Copies of "The Dairymen's Dilemma" or "Mischief in the Milky Way" may be obtained by addressing a request to The Rex Company, Burlington, Iowa.

Oil Remover

A NEW METHOD of removing oil from refrigerant gas is offered by the Niagara Blower Company as a part of the Niagara Duopass Aero Condenser.

The new apparatus, called the Niagara



Oilout uses a cylindrical drum located at the outlet of the Duopass Coil so that the refrigerant gas enters with a tangential motion. More oil is removed by this method because the Duopass Coil has reduced the temperature of the gas so that the oil vapor has been condensed. Expansion of the system from a 4" pipe to a 14" drum (in the model illustrated) reduces the velocity of the gas so that the oil is easily removed and held by the wall and separator plates of the trap.

A sight gauge and valve for draining the oil are provided. Removing oil from refrigerant gas in this manner greatly improves the efficiency and capacity of a refrigeration system. This equipment is manufactured by the Niagara Blower Company, 6 E. 45th St., New York 17, N. Y.

Driv Lok Pins

DRIV-LOK PIN COMPANY, Chicago, announces a complete line of standard and special self-anchoring, vibration-proof pins which are designed to replace more expensive taper pins, keys, cotter pins, set screws, rivets, etc. These pins, which are pressed or driven into standard drilled holes, have four flutes on the surface parallel to the axis. The length and position of the flute can be controlled accurately, so that fully or partially grooved pins are available. Fully grooved pins have a pilot at one end so that the pin can be easily inserted.

The raised, work-hardened edges of these flutes provide an expanded diameter of a few (specified) thousandths greater than the nominal diameter of the pin. When the pin is inserted in a drilled hole, these raised edges are compressed inwardly, providing a resilient, self-locking element which, it is claimed, will hold indefinitely under vibration or shock conditions. They are available in sizes from 3/64 to ½ inch diameter, and from 3/16 to 4½ inch in length, in any material, and in a wide variety of types.

Packaging Aid

MANUFACTURERS with packaging problems will be interested in a new booklet entitled "Arrived O. K." which has just been announced by Minnesota Mining and Manufacturing Company, makers of 3-M Adhesive and Coatings.

In addition to detailed information on adhesives made to meet government specifications to withstand rough treatment, extremes in temperature and high humidity, the booklet utilizes actual photographs to illustrate step-by-step operations involved in sealing fibreboard and V-board shipping containers and waterproof case liners for export shipment.

Sections of the booklet are headed: The Proper Method of Sealing Fibreboard Boxes; How to Make a Good Waterproof Liner; How to Seal Small Packages; How to Seal Wooden Shipping Containers Using Preformed Liners; How to Seal Hard-to-Wrap Packages in Containers; Two Easy Methods of Sealing Flaps.

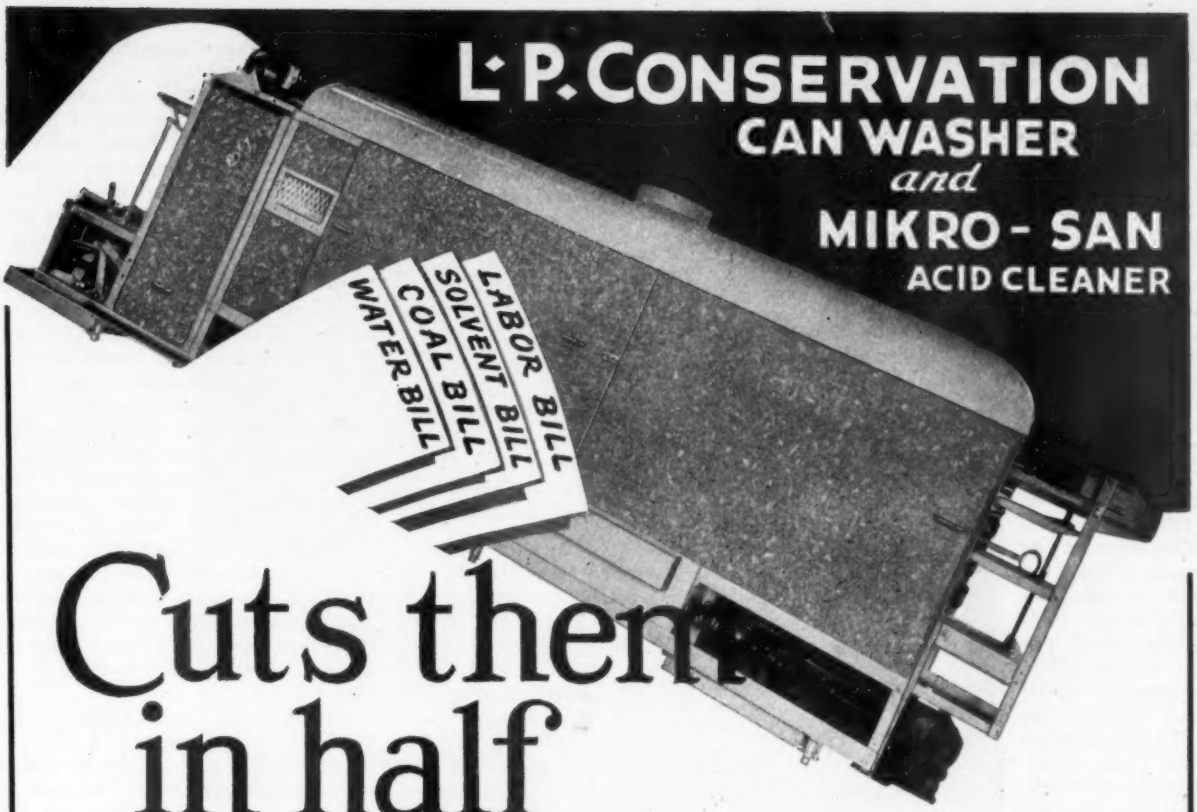
Free copies of this booklet can be obtained by writing to Minnesota Mining and Manufacturing Company, St. Paul 6. Minn.

Food Mixers

ILLUSTRATED BULLETIN describing batch mixers with beaters and whips for whipping cream, making cottage cheese and mixing other dairy products has been issued recently by the Reynolds Electric Company.

This equipment is made with two and four speeds in 12 and 22 quart capacities. It can be quickly equipped with attachments for chopping, grinding, slicing, etc.

Copies may be obtained by writing to Reynolds Electric Co., 2650 W. Congress St., Chicago 12, Ill.



Cuts them in half

For more than thirty years the Lathrop-Paulson Company has step-by-step added patent-after-patent in the improvement of their first can washer.

The advent of L-P Mikro-San and superheated water (225°), plus a skimming device that constantly and automatically separates and removes all fat, solids and foreign matter, leaves wash and rinse water clean and clear at all times. It has accomplished such conservation in coal, heated water, steam, solvents and labor – with resulting great reduction in bacteria, milkstone and limestone deposits – that all previous economy efforts have been surpassed (by half).

Today the Conservation Can Washer has established such records of efficiency, economy and thoroughness that it is standard in the receiving rooms of the largest producers.

THE LATHROP-PAULSON CO.

2459 West 48th Street, CHICAGO 32 — 152 West 42nd Street, NEW YORK 18

2261 15th Avenue, SAN FRANCISCO 16

MANUFACTURERS OF

Straightaway Can Washers
Stainless Steel Weigh Cans
Stainless Steel Receiving Tanks
Rotary Can Washers
Power Conveyors
Gravity Conveyors
Vacuum Samplers

Conservation + Efficiency

L·P AUTOMATIC SYSTEM

New Borden Record

Sales in 1944 Highest in Company's History — Dividends Per Share Exceed Those of Previous Year

The sales of the Borden Company in 1944 were the highest in its history, according to President Theodore G. Montague. In the annual report to stockholders released March 16 Mr. Montague states that total sales for the year by the company and its domestic and Canadian subsidiaries were $410,478,189 as against $371,866,527 for 1943, an increase of 10 per cent.

Theo. G. Montague

The company's net income was $9,987,994, or 2.4 per cent of total sales, representing a percentage of sales among the lowest in the company's history. This equalled $2.35 per share on the 4,250,000 shares of capital stock owned by 49,174 stockholders at the close of the year. Net income for 1943 was $9,405,705, or 2.5 per cent of sales, amounting to $2.17 per share on 4,325,000 shares then outstanding. Dividends paid during the year amounted to $1.70 per share as compared to $1.50 per share in 1943.

The main efforts of the Borden Company, Mr. Montague said, were directed toward fulfilling the requirements of the government and the armed forces for such products as ice cream, fresh milk, condensed and evaporated milk, powdered milk, powdered eggs, powdered coffee and cheese. In addition, the increased demand of the civilian population for dairy products in both the United States and Canada was met with considerable degree of success.

Higher costs in the fluid milk division were absorbed in part by economies resulting from the system of every-other-day delivery which was instituted as a war time conservation program, Mr. Montague said.

Value of Diversification

"Preservation of these economies will be absolutely at favorable levels. Without this preservation of lowered distribution costs for home-delivered dairy products, it is very doubtful whether this service can be maintained in large cities in the post-war years. Prices to consumers would, of necessity, have to be much higher merely to cover the increased cost of distribution, and volume of sales might easily diminish to a point which would make continuance of home delivery impossible."

Mr. Montague also pointed out that the policy of diversification of the company's activities established some years ago, and the development and promotion of products other than fluid milk have resulted in strengthening earning power and establishing a firmer foundation for future progress.

In discussing employee relations, Mr. Montague said: "The relationship with employees was, in the main, harmonious for the company and beneficial to the best interests of a nation at war.

"Rank and file employees are beginning to appreciate some of the inescapable problems that confront the company as a whole. There is, for example, a better understanding of industry economics. Equally important, there is a general realization of the fact that individual security exists only when the employer is able to operate on a sound basis, and that the employer's stability is largely dependent upon the efficient, high productive effort of the individual employee."

During the year the company paid out $295,111,000 to farmers and other suppliers of materials, employees and for taxes, as compared with 1943 payments of $268,093,928. Total taxes amounted to $30,281,637 or $7.13 per share.

Here's Patapar

Its WET-STRENGTH helps keep foods fresh

Soak Patapar* Vegetable Parchment in water, crumple it up, then pull it out tight—it remains firm and strong. Patapar even can be boiled without harm.

This great wet-strength of Patapar has solved one of the hardest problems of protecting moist foods.

Resists grease, too

Patapar resists the penetration of grease, fats, oils. Wrapped in its clean folds, products like butter, shortening, bacon, cheese are kept fresh and appetizing.

Right now most of the Patapar produced is required for war purposes. But a limited amount is available for essential packaging needs. And if you're looking ahead, this is a good time to investigate and see how Patapar might be helpful in protecting your product.

*Reg. U. S. Pat. Off.

Patapar Keymark

This little keymark is the nationally advertised symbol of wrapper protection. When you include it on your printed Patapar wrappers you tell your customers that your product is well protected.

Paterson Parchment Paper Company • Bristol, Pennsylvania

Headquarters for Vegetable Parchment Since 1885

WEST COAST PLANT: 340 BRYANT STREET, SAN FRANCISCO 7, CALIFORNIA

BRANCH OFFICES: 120 BROADWAY, NEW YORK 5, N. Y. • 111 WEST WASHINGTON ST., CHICAGO 2, ILL.

Trippings and Costs

(Continued from Page 128)

B. *The weights of breakage and bottles not returned are now converted into percentage.* The total weight of bottles filled is determined by multiplying the number of quarts filled by the weight of the bottle, which may be 17¾ oz., 22½ oz. or 25 oz. and dividing by 16. This will give you the pounds of quart bottles filled. For the number of pounds of one-half pint bottles filled, you may divide the number of bottles by 2 as each one-half pint weighs 8 oz. If determining weight of pint bottles, each bottle weighs 12 oz. or ¾ lb., therefore you multiply the pint bottles filled by 3 and divide by 4.

When you have obtained the total weight of all glass filled, you divide this weight into the pounds of breakage in each column and that gives you the percentage of breakage in that particular column. For example, if we have filled 10,000 lbs. of bottles and we have 10 lbs. of broken glass in returns in the column for returns, we divide 10,000 into 10, which gives .001 equivalent to .1 per cent broken. Each column is figured in a like manner and the four first columns are totalled to make the total percentage of breakage.

C. *Trippage based on plant breakage.* By dividing the percentage of total breakage into one, you can determine the trippage that your bottles would obtain if there were no other lossses other than plant breakage. This is explained in more detail under total losses.

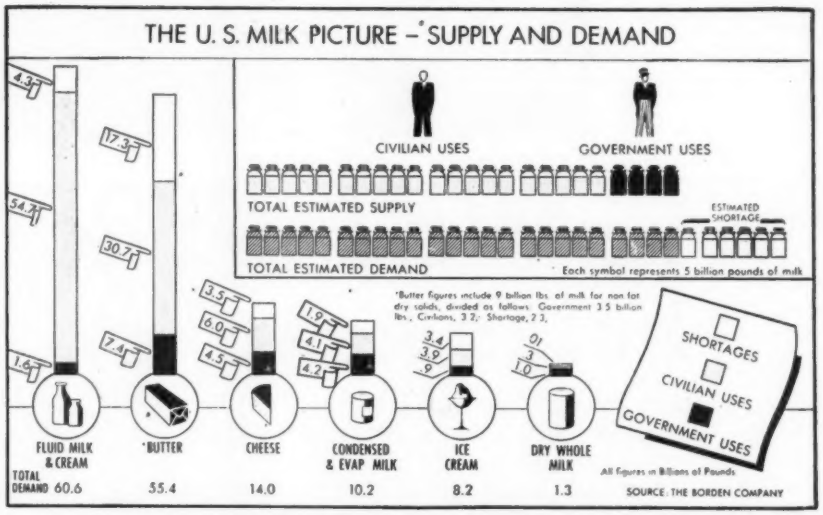
D. *Bottles lost or not returned.* The bottle lost or that are not returned are determined by the difference between the bottles that you have given out from the plant for a period of a week or more and the bottles, which have been returned by your drivers. It's possible that this may show a gain rather than a loss, but over a period of four weeks or more, it usually shows a loss. This record does not take into consideration deposits, which you have collected, but it does check on the drivers' returns. Some dairies have shown that the drivers return more bottles than they take out, yet new bottles are always placed in use without any increase in business, which proves that there is a discrepancy in checking return bottles from the drivers. By dividing the total weight of bottles filled for the period into the total weight of bottles not returned, you can determine the percentage of bottles lost or not returned.

E. *Total losses.* By totalling the percentage of bottles broken and the percentage of those not returned by the driver, we have the percentage of bottles, which must be replaced. By dividing this percentage into one, it gives you the trippage. If your total broken bottles column and the not returned column adds to .75 per cent, this divided into one gives 133, which is the trippage of your bottle. If the total loss is 1 per cent, this divided into one gives 100, showing a trippage of 100. If the total loss of bottles is 2 per cent, this indicates a trippage of 50.

Given above are the figures of bottle experiences from five milk plants.

You may now figure the trippage by both methods, the replacement trippage and the trippage determined by cullet. The difference between these two methods should check except for the number of bottles for which you have received a deposit. By using the two methods, a plant superintendent can check his entire bottle operation.

Place of breakage					Trippage based on plant breakage	Bottles not returned	Total broken and not returned	Trippage
Returns and up to washer	Bottle washer	Bottle filler	Cold storage	Total breakage				
.365%	.215%	.229%	.0752%	.8848%	113	1.0722%	1.957%	51
.068	.491	.106	.044	.712	140	.136	.848	117
.231	.165	.152	.099	.647	154	.28	.927	107
.23	.27	.16	.08	.74	135	Gained	.46	201
.167	.04	.28	.11	.60	166	2.00	2.6	38.4



Disposition of the national milk supply this year may be indicated by the trends of 1944, as shown in the chart above. Unless a sharp change in the military and lend-lease picture should occur, it is estimated that approximately 150 billion pounds of milk would be necessary to meet all demands for milk and dairy products. Preliminary estimates place the probable production at between 119 and 120 billion pounds, leaving a substantial shortage.

Spray Process Dryers

Continuous or Batch Operation for drying

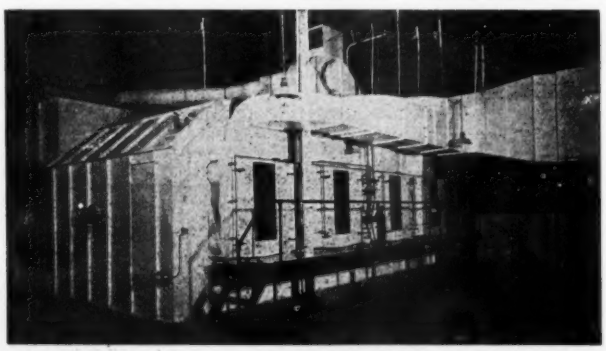
MILK, EGGS AND OTHER FOODS FULL RECOVERY OF SOLIDS

Economical Operation

High Temperature Cream Pasteurizers

—o—

Hotwells



Condensing Equipment

with efficient entrainment separator

Designed to produce highest quality

CONCENTRATED SKIMMILK
WHOLE MILK
ICE CREAM MIX
BUTTERMILK

—o—

Ask us for Location of Nearest Installation

C. E. ROGERS COMPANY **8731 Witt Street, Detroit 9, Mich.**

Planning Construction of the Post-war Plant

Radically New Materials Improbable for Some Time — Better Finishes and More Modern Designs Expected*

(By George W. Robinson)

***In the March issue of the "Review" there were published two papers on "The Milk Plant of the Future," presented by H. McNabb, chief engineer of the Sheffield Farms Company, and A. J. Smith, consultant on plant operation and sanitation, at the February Meeting of the Metropolitan Dairy Technology Society in New York City.**

A third paper, delivered by George W. Robinson of the Equity Construction Company, pertaining to the post-war construction of ice cream and other dairy plants, is presented herewith:

THE PLANNING of an ice cream plant to be erected or modernized when the present wartime restrictions on materials and labor are relaxed, should be considered from three angles: No. 1—Size; No. 2—Location; No. 3—New development of building materials and technique.

First, let us take up the consideration of size, and by size I mean the quantity of production. We have all seen the emphasis, during the past, on centralization of manufacturing process to the end of a low manufacturing cost, but it is true that this cycle has reached its peak. There has been, during the past ten years, a great advance in the development of the medium and smaller sized units of manufacturing equipment to such an extent that the unit cost of production between a large output and a small output is becoming progressively narrow. In short, in planning for the future, most emphasis now can be given to personnel management and future sales expansion as the governing factors.

Our next consideration for post-war planning should be location, particularly as it applies to existing manufacturing plants which are to be modernized or expanded for increased production. A recent survey made in connection with post-war planning and covering a great many cities throughout the country, revealed a wide trend of all cities, large and small, to become zone-minded. This is due somewhat to the large scale plans for post-war housing and slum clearance. However, the new development of this zoning of property for certain uses, has taken a new twist.

Every zoning ordinance at the time of its enactment, makes a number of compromises between the arrangement of buildings and land uses as they exist in the city. Non-conforming uses have been permitted to remain, with some restrictions as to their expansion. However, there is now a definite move to eliminate these existing non-conforming uses by fixing through law a limited life on such non-conforming use. Some states, indeed have reduced this non-conforming use to as little as five years.

Therefore, before planning extensive improvements and making future capital investments on existing manufacturing plants located in cities, it would be well to investigate this phase and be guided accordingly.

25 YEARS SUCCESSFUL MANUFACTURING EXPERIENCE
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Built to endure
For more than 25 years Superior craftsmen have produced dairyware.
Through long experience Superior men have come to look upon their work in the traditional craft spirit — a spirit that derives genuine satisfaction from work well done — a spirit that welcomes the challenge of time which proves that Superior dairyware is built to endure.
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OF Consumer and Jobber preference the country over—that's the unvarnished truth about ***Seal-Leaks, the Universal Name in Gaskets.***

Ten-to-one, your Jobber carries Seal-Leaks. And he stocks them because, in the scores of milk plants he serves, ***Seal-Leaks*** are already in demand. They're doing the job—are now giving satisfaction—have proven their leadership!

Yes, there's a ***Seal-Leak*** for every milk-joint closure in your entire plant. Always a perfect fit. Easy to store and to use.

Ask your Jobber for SEAL-LEAKS by name.

BEAVERITE PRODUCTS, INC.

Beaver Falls, New York, U. S. A.

3

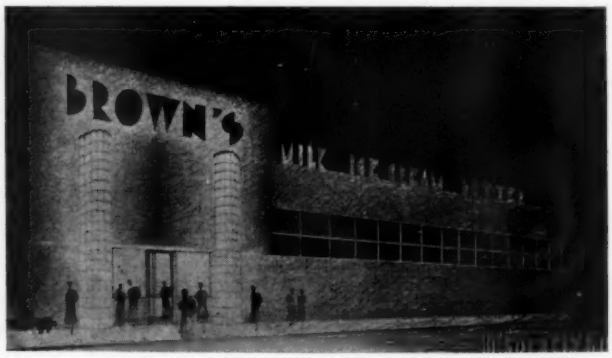
Building Materials and Techniques

Now thirdly, we will consider new developments of building materials and building techniques:

In spite of the avalanche of propaganda to the contrary, there will be, in my opinion, no fundamentally new methods of building construction as relates to industrial plant structures, and only a few new types of building materials and process equipment, which will be ready for actual use in the several years immediately following the close of the war and the release of the many wartime restrictions.

According to surveys made among manufacturers of building materials, it is clearly indicated that among the structural materials such as (wood, masonry, concrete and steel) and in the field of building equipment such as (heating, plumbing and electrical facilities), the principal developments brought out during the intensified period of the war, are mostly technical improvements in the manufacture and production of old familiar products. Again, there is no practical likelihood of any great substitution of plastics or new metals for standard materials because it actually takes a number of years to establish their performance characteristics under diversified operating conditions.

One example that is familiar to all of us is the steel sash used in the past for windows in ice cream plants. We all



Artist's Sketch of Brown Ice Cream & Milk Co., Bowling Green, Ky.

know that they are not satisfactory. They deteriorate due to rust and they constantly require painting and maintenance due to corrosion caused by the extreme humid atmospheric conditions in most of the manufacturing spaces. Many of us have looked forward to the use of other metal, such as aluminum, and now it would be natural to expect a lower cost sash made of this material because, during the war, the facilities of producing this material have been greatly increased.

However, there is no assurance as yet that this type of sash will withstand certain conditions other than moisture, and no manufacturer is going into mass production until he has experimented for some time under actual working conditions.

I do know at this time that the William Bayley Company are seeking from the ice cream and dairy industry any experience data they may have on the limited use of this metal for windows in the past.

Finishes and Floors

On the other hand, there will be available immediately after the war, all types of improved finishes, particularly the finishes on all equipment, through the advanced knowledge of the chemistry of paints and synthetic resins. These, along with certain fire-resisting paints, are now in production and in use in war production.

As to floor finishes, the brick tile for certain spaces still seems to be the only answer. The mortar joint, however, can be greatly improved by the use of several new preservatives. However, the life of a brick tile floor still depends on the care

in which it is installed. By that I mean the full bedding of the tile and the use of a medium sized joint.

Terrazzo floors with aluminum chips to retard slipping, will be used extensively. Through the ability to get better drainage, this type of floor can be kept cleaner and in so doing preserve it against the action of lactic acid.

For wall finishes we believe there will be a much greater use of structural wall tile. There are several new manufacturers preparing to go into this field and it will undoubtedly result in low cost through competition. This type of wall finish eliminates the constant cost of painting, insures a really clean surface, and from its structural features, tends to reduce the initial cost of a wall structure.

The extensive use of glass block for light and modern treatment can certainly be looked forward to. Its characteristics are familiar to all of us and undoubtedly the greater use of this material, will result in lower cost.

We believe that the post war ice cream plant will include greater use of controlled ventilation, not cooling necessarily, but mechanically handled filtered fresh air, dehumidified for certain manufacturing spaces now operating under very humid conditions at times. This, in conjunction with glass block, will insure a cleaner plant and lower cost of maintenance.

In connection with cleaning, it might be well to mention the development of the Precipitron. This device will electrically charge particles of dust and dirt suspended in the air and by means of opposite charged plate, attract the minute particles and in that way remove the dirt from the atmosphere before it settles. This equipment will not be immediately available, but I am told it has advanced to such a point that it will be in common use in a few years.

Planning the Post-War Plant

So much for structural details. Now let's consider the general space in planning the post-war ice cream plant:

In the first place, we believe that more emphasis will be given to its outward appearance. Without extravagance, good taste in the design of a food plant is certainly a modern trend. The public in general is more and more conscious of the appearance of a package and is going to feel that a food plant should not look like a foundry.

Now as to space allotment—we are going to have to provide locker and wash room facilities to an even greater extent than before. Factory laws will become more and more strict in this respect.

Greater spaces will be required for novelty manufacture. This space should be as free from columns as is economically possible and in this way will always be adaptable for future changes in this part of the ice cream business.

Storage space, that is dry storage room for containers, cartons, etc., should be clean, light and well ventilated, as it is as important to have a clean container as it is a pure product. Of course, at the present time, due to wartime purchasing conditions, the requirements for this type of space are abnormal, but the efficient plant of the future should have more storage space as close to manufacturing areas as possible to avoid re-handling.

The planning of post war plants to be erected or altered when the present wartime restrictions on materials and labor are relaxed, can and should proceed vigorously with complete assurance that all prewar standard types of materials and equipment will be available as rapidly as the respective industries can re-convert to peacetime production.

Deferment of building plans to await mystery materials, magic plastics or major reduction in cost of construction, will deprive the owner of the advantages to be gained by the early exploitation of new fields of distribution that will most certainly open up at the close of hostilities.

To the extent that planning for peactime can proceed

DOLLAR EFFICIENCY—work done per dollar spent—measures the value of steam generation

If you are planning immediate boiler installation or replacement, the efficiency and economy of a Cyclotherm Steam Generator will interest you. While the range of available units obviously cannot be on a peace time basis, Cyclotherm engineers will gladly cooperate in meeting your needs in power, processing or heating with available units.

Cyclotherm meets the dollar efficiency test through a wide power range (10 to 300 horsepower) with both oil and gas fired units. Its exclusive principles of combustion and design have proved Cyclotherm's dollar saving and dollar making capacity under most rigorous operating conditions.

Cyclotherms are fully automatic, sturdily built and completely self contained. They give years of trouble free service with a minimum of attention.

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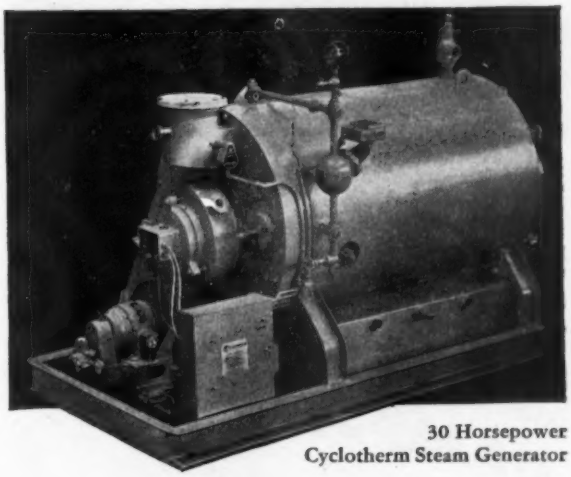

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The Damp-Tex system of painting kills rust, rot, fungus and bacteria. Stops deterioration. Can be applied on any paintable surface, wet or dry, with equal ease and efficiency... changing dingy, rough light-blotter interiors into glistening porcelain-like beauty. One coat covers. Resists acid, alkali, corrosive gases and oxidation. Dries overnight without flavor-tainting odor into waterproof film. Comes in white and colors.
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without hindering the prosecution of the war, it should proceed. For right behind victory on our two-front war, there is a peace to win at home. V-Day planning should continue to be pushed to the fullest possible extent consistent with a policy that demands the war come first.

Yami Yogurt Status

Specially Cultured Milk Wins Consumer Acceptance in Southern California

WHILE YOGURT, a specially cultured milk, has met with varying degrees of success (usually adverse) in this country during the last twenty years the same product was being favorably received in European cities such as Paris, Vienna and Prague prior to the war, when as much as 100 thousand jars were sold daily. Yogurt acceptance in this country differed to a marked degree when compared with that enjoyed in many European cities.

It was not until relatively recent years that Yogurt milk, under the trade name of Yami Yogurt, made itself felt as an important milk trade item, and that was in southern California. Studies to determine the reasons for success or failure in the sale of Yogurt milk in this country reveal that public acceptance failed because Yogurt was pushed as a sort of medicine or high-priced specialty in most instances. Secondly, quality was not the best because the cultures were obtained from European sources which did not produce high quality and a uniform product due, no doubt, to the unavoidable time lag in transporting to this country.

Home of Rosell Bacteriological Dairy Institute at La Trappe, Canada.

Success in southern California in re-introducing Yami Yogurt to the American public was induced by taking advantage of past mistakes. The expanding sale of Yami Yogurt there was induced by publicity stressing the theme that Yogurt is a milk food and not a medicine. It was sold to the trade as a staple dairy product well worth its cost of 15c a half-pint. This price provided a margin of profit sufficiently large to allow for a forceful advertising campaign, and at the same time yielded a substantial profit to the dairy selling it.

Caution, too was exercised in procuring cultures that would insure uniformly high quality and an acceptable product. The cultures are now obtained from the Rosell Bacteriological Dairy Institute, La Trappe, Canada, where the greatest care is exercised in maintaining cultures that will produce a most desirable product. A recent study in the territory where Yami Yogurt is now sold shows that customers like the product and repeat their purchases, as compared to previous experiences where it was bought once for trial and not repeated.

Another important factor responsible for the successful sale of Yami Yogurt in southern California is the type of advertising campaign adopted. A prominent advertising agency with a national background was secured to supply the necessary specialized experience. After considerable study the agency prepared a well-balanced local and national campaign, using all primary media and supplemented by point-of-sale material.

An article published in the "Review" several months ago detailed the outstanding results that were obtained in this particular territory.

Consumers' Cooperative Growth

New York City Organization Buys Up-State Plant — Other Supply Sources in New Jersey and Pennsylvania

Following a meeting March 21, in Grange Hall, New Paltz, N. Y., the Consumer-Farmer Milk Co-operative, with headquarters in New York City, announced that it has recently purchased the milk plant at New Paltz formerly owned by the Brescia Milk Co. This is said to be the first New York State milk plant to be operated by a consumer co-operative.

According to an announcement made at the meeting producer members whose milk is received at the plant for sale to consumers in New York City will share in its annual earnings in proportion to the amount of milk they supply. Consumer-members also are entitled to patronage-dividends, on the basis of amount of milk purchased.

During the last dividend period, covering milk delivered up to March 31, 1944, it was stated that the co-operative had declared a dividend of $27,593.52, of which $7,336.95 was paid to New York and New Jersey producer-members.

Chairman of the New Paltz meeting was Rev. Clarence E. Boyer, pastor of the Madison Square Church House, New York City, vice-president of the co-operative. Rev. Boyer expressed the hope that the business relationship between the Ulster County dairymen and the New York consumer group would be of mutual benefit and of long duartion. Mr. Meyer Parodneck, president of the Consumer-Farmer Milk Co-operative, who offered membership in the co-operative to the dairymen, explained that only by becoming members could the producers receive patronage dividends, in addition to their regular milk checks.

The Consumer-Farmer Milk Co-operative was founded in 1937 by a joint committee of consumers and farmers, headed by the late Dr. Caroline Whitney, a member of Mayor LaGuardia's milk committee which was set up to study methods of improving milk distribution.

Included among the co-operative's board of directors are Miss Helen Hall, director of the Henry St. Settlement, and Miss Mildred A. Gutwillig, of the United Neighborhood Houses, both of New York City.

The co-operative also owns a milk plant in Belle Mead, New Jersey, and receives milk from the Berks County, Pa., Farmers Union Dairy Co-operative Association, which owns and operates a milk plant at Tuckerton, Pa. The Co-operative distributes about 50,000 quarts of milk a day in New York City.

Re-employment of War Veterans

Recent Study Intended to Aid Employers in Post-War Planning and Clarifies Problem of Re-employment

"Re-employment of War Veterans," a companion report to "The Employment of the Handicapped Veteran," has just been issued by the Policyholders Service Bureau, Metropolitan Life Insurance Company. This new study is intended as an aid to management in its planning for the postwar period to help clarify the problem of re-employing returning veterans.

The study reports that the re-employment provisions of the Selective Service Act are already a minimum program rather than a maximum in many companies. This is particularly true of those companies anticipating little difficulty, with proper planning, in providing employment for servicemen. Quoting a number of the provisions of Section 8 of the Selective Training and Service Act of 1940, as amended to December 8, 1944, the report offers a list of questions related to the interpretation

Photo by H. Armstrong Roberts

Sectional view, showing powerful but gentle inclined-blade agitator; also handsome pitched cover, either half instantly demountable.

The Last Drop

JUST as delicious as the first, if the processing has been done in a PURITY Senior — **"The Aristocrat of Pasteurizers."**

An exceptionally handsome machine, constructed of heavier materials — the most up-to-date milk man could ask for nothing finer or more durable. Thoroughly heat-insulated with pure corkboard. Inner vat completely surrounded on bottom and sides with hot water. Very fast heating, deep cream line, and fine flavor. Very simply and powerfully built throughout for years of faithful service.

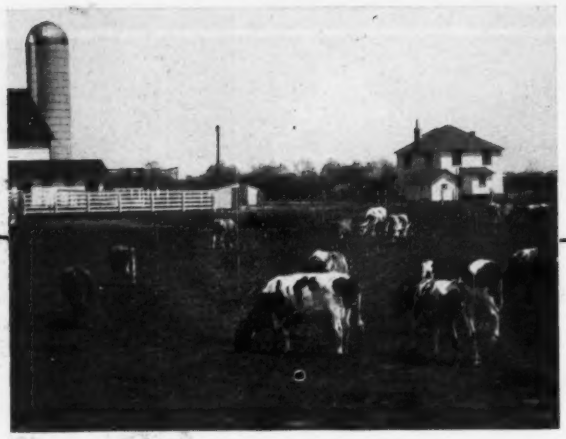
Our complete line of pasteurizers probably contains just what you need. Higher priorities available — write us your needs.

OAKES & BURGER CO., INC.

Milk Handling Machinery and Supplies

Cattaraugus, N.Y. - Youngstown, O., U.S.A.

EST. 1873 - MORE THAN SEVENTY YEARS OF HONEST EQUIPMENT



Doing Their Best

All over America, fine herds of dairy cattle are producing pure, sweet, wholesome milk.

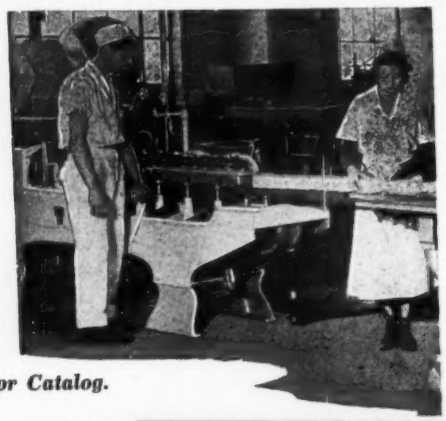
This milk quality should be protected at every step from farm to market. Milk should always be stored or shipped in sanitary, well-tinned cans.

That's the kind SOLAR-STURGES makes — bright, shining, attractive-looking cans with a durable coating of Pure Tin. SOLAR-STURGES cans afford safety, protection, and assurance that a quality product will get to market in tip-top condition. Greater profits are the natural result.

When you need new cans, be sure to get SOLAR-STURGES cans.

SOLAR-STURGES MFG. CO.
MELROSE PARK, ILLINOIS

Drip! Drip!
KEEP *your* PROFITS
by installing
DOERING BUTTER PRINTERS
Doering machines produce butter prints of superior mold at unbelievably low cost . . . always uniform in shape, weight and moisture content. Sizes and speeds for all sized operations.



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and application of such provisions, the answers to which should help in formulating company policy.

The greater part of the report deals with company programs to meet post-war needs. The following seven steps specified as those commonly taken in arriving at a proper solution are discussed: (1) Get the facts, (2) Make forecasts, (3) Determine company policy, (4) Plan in advance for proper placement, (5) Inform employees of the re-employment policy, (6) Prescribe the attitude of Supervisors toward returning veterans, and (7) Set up a re-employment procedure. In enlarging upon each of these steps, the study describes the practices and procedures of individual companies and illustrates the forms used.

A copy of either or both of the above-mentioned reports is available to dairy plant executives who request it on their business stationery. Address: Policyholders Service Bureau, Metropolitan Life Insurance Company, 1 Madison Avenue, New York 10, N. Y.

Embassy Dairy's Radio Show

Buys News and Art Brown Show — Renews Sponsorship of "The Johnson Family" on WOL

Embassy Dairy, prominent milk distributor in the metropolitan Washington, D. C., area for Dannon's Yogurt, has recently signed up for the 9.00-9.30 A.M. strip across the board, Monday through Saturday on WOL, Washington, D. C.

Left to right—Alexander Steinberg, Henry Seay, Art. Brown, Daniel Carasso; seated—A. B. Fletcher

The program will consist of five minutes of news by Jay Caldwell, followed by a musical show featuring Art Brown, WOL early-morning emcee, at the organ. Agency handling the Embassy account is M. Belmont ver Standig.

Embassy Dairy, one of the largest independent dairies in the capital city, has also renewed sponsorship of "The Johnson Family" on WOL for the third consecutive year, and has gone into the fourth straight year of spot announcements. The Dairy has been on WOL without pause since January, 1942. WOL is the Cowles station in Washington.

Chicago Prices Continued

Washington, D. C.—To encourage sustained milk production in the Chicago milkshed, the War Food Administration has suspended a portion of the federal milk marketing order for this area which would have decreased producer returns for Class 1 milk during the flush milk production season. The suspended portion called for a drop of 20 cents per 100 lbs. in the producer price during May and June.

Advises on Foreign Trade

DISA Issues Address by Dr. Amos E. Taylor Prepared for the Cancelled Annual Meeting

WASHINGTON, D. C.—Dairy Industries Supply Association has distributed in printed form to executives of its member companies a discussion on post-war foreign trade prepared by Dr. Amos E. Taylor, Director, Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce, for DISA's 26th annual business session before the special features of that meeting were cancelled to minimize attendance. The meeting, held in New York City on February 14, was fully reported in the March issue of the "Review".

The text of Dr. Taylor's intended talk stresses the part played in dairy equippers and suppliers in the war program and the role that awaits them in advancing the uses of milk and milk products after the war. It also deals with "a new concept of international trade," in which the necessity of purchases from as well as sales to a foreign market is recognized.

In addition to outlining in considerable detail the numerous helps to American exporters that are provided by the Bureau of Foreign and Domestic Commerce, Dr. Taylor's text also cites the volume of recent United States transactions with other countries involving dairy products and certain equipment and supply items.

Playing a Major Role

Dr. Taylor's analysis of the supply and equipment industry in relation to the war and post-war periods follows:

"You are part of a huge industry—one of the most important in terms of human needs. For, dairy products of all kinds rank among the highest of food essential to health.

"As producers of machinery and equipment and supplies serving the great dairy industry, you have played a major role in raising its standards and lowering production costs. But even more important, your products have been the means of providing the American public with a quality and a service unparalleled anywhere throughout the world.

"The war has placed a heavy strain on your production facilities. In many instances, however, it has bred marked advances. For in satisfying the difficult demands of your Government—including the making of special equipment acceptable for submarine, aircraft, ordnance and so on—you have devised better techniques.

"You have made these improvements without expanding your plants to any marked degree.

"Certainly if we are to achieve our post-war goals of raising the American standard of living through full employment and making available those things that spell a better life, you can look for a greater per capita consumption of dairy products here at home.

"But your vision goes beyond this obvious market. You are now witnessing the basic product of the dairy industry—milk, American milk at that—as a pioneer, going to far off countries and strange named places in dried, evaporated and other forms. Countless numbers of our world citizens have experienced for the first time a sight and taste of milk.

"It is most natural, therefore, that you should anticipate a tremendous increase in world consumption of milk and other dairy products when we return to a peacetime economy."

New Concept Needed

Concerning basic procedures for an international trade that will afford stability, Dr. Taylor's text asserts:

V ICE CREAM EQUIPMENT

Girdles the Globe with GI Joe

PHOTO BY AIR CONDITIONING & REFRIGERATION NEWS

In the storm-swept Aleutians: a 1000-gallon ice cream plant delivers the goods daily

No matter where he is serving, Joe wants his ice cream. He wants it in steaming jungle, in blazing desert, on frozen islands, on speeding transports. And he gets it.

In practically every war theatre, major or minor, E-T ice cream equipment is on the job, bringing cheer and building morale.

Additional equipment is being shipped as fast as E-T can make it—not only to the army but to all other services, to sailors and marines, to WACS and WAVES.

Military needs are so great that E-T cannot devote any of its current production to civilian purposes. Take good care of your present equipment!

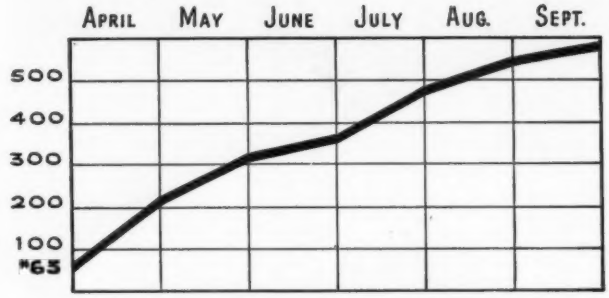
EMERY THOMPSON

MACHINE AND SUPPLY COMPANY

1349 Inwood Avenue, New York 52

The best way to sell more milk to more stores is to sell YAMI YOGURT!

Here's proof:



**This figure from the record of a West Coast Dairy (name on request) indicates its total store distribution of combined milk and Yami Yogurt at the start of the 6-months' period shown in the sales-curve.*

QUITE APART from its own profit-performance as a dairy specialty, Yami Yogurt is a great "door opener" in winning new retail outlets for milk sales. Some choice territories are still available to aggressive dairies. Write or wire for franchise details! Yami Yogurt Products Company, 147 No. La Cienega Blvd., Beverly Hills, California.

NEW SOLDERING FLUX FOR STAINLESS STEEL

No. 5 Tri-Flux

"TRIPLE DUTY FLUX"

CLEANS ★ REMOVES DIRT ★ FLUXES

This amazing new flux can be applied directly to a wet, dry, or oily stainless steel surface without pre-cleaning with acid. Simply dab on with a brush: no other work or preparation needed. Won't run off vertical surfaces. Non-injurious to the metal. Tri-Flux is fast, thorough, and economical — a valuable time saver because it does three jobs in one.

One of the largest manufacturers of dairy machinery writes: "The two sample bottles of No. 5 Tri-Flux for stainless steel and monel metal only are the best we have had for fluxing stainless steel to date. The solder flows freely and the black discoloration left from regular acid is eliminated, leaving a cleaner looking job. Our purchase order for a supply of this is being forwarded."

Send for free trial sample and you'll never again be without Tri-Flux No. 5.

Manufactured only by

THE WOLFE-KOTE CO.

SHEBOYGAN WISCONSIN

"Let me discuss briefly some of the broader issues that are claiming the attention of both Government and business. They are issues upon which we must think clearly and make wise decisions while we are putting our every active effort on speeding victory on all fronts.

"First, we must decide what we really mean when we talk about foreign trade after this war. Are we thinking of selling our surpluses to all comers abroad who have the price and at the same time carefully buying only those materials that we must have, with no regard for a degree of balance between them?

"Such a definition fails to take into account the economic well being of the rest of the world, and we need go back but a few short years before the war to recall the consequences of such a condition. Then it was amply demonstrated that this country cannot long be prosperous when the rest of the world is suffering from depression.

"Therefore, it is clear that we must supplant the old with a new concept of international trade. We must learn and use a far broader definition—one that works along parallel and constructive lines leading to a world enjoying sound economic health.

"The key to such a world is to be found in a report published by the Department of Commerce about a year ago entitled *The United States in the World Economy*. Here is set forth the experience of this country in the fields of international trade and finance during the period between World War I and the present conflict.

"We learn from this factual account of our transactions abroad that trade which includes all types of international commercial transactions is a two-way affair; that in the final analysis imports finance exports.

"Thus we should view international trade in terms of benefits in which each nation may share. One nation's exports are another nation's imports. Sound economic conditions must prevail at each end if restrictive bottlenecks are not to develop. In other words, the world community cannot long remain highly prosperous in some areas if it is economically unstable and depressed in others.

"But if we are successfully to contribute to world-wide prosperity we must also wisely decide the issue of investment. Obviously investment made abroad purely for the sake of achieving special temporary gains or for satisfying a momentary speculative urge serves no useful purpose. More important, it contributes nothing to the maintenance of that very stability which is so essential to a healthy world economy. This holds true in any investment market, domestic or foreign.

"The matter of investing in other countries is of particular interest to those of you in the Dairy Industries Supply Association who are considering the wisdom of entering foreign markets. For whether you should sell your machinery and equipment and supplies to foreign producers or to American firms who intend to start dairy industries abroad, you will be partners in improving the economy of whatever world neighbor is to benefit.

"There are those who fear this type of industrialization. They argue that any steps that may lead to industrial growth in another nation will cut off American markets for the goods it will make with its own labor and plants built with either home or else foreign capital. The arguments are comparable to those often used with respect to any raising of our imports beyond the barest necessities. In the latter case, fear is also expressed lest American markets be adversely affected through competition.

"In either case, the fact is ignored that ultimate results of foreign industrialization are a higher standard of living

and a greater purchasing power for all classes of American goods."

Trade Figures Analyzed

Transactions before the war are thus reported in Dr. Taylor's text:

"In 1939, the major supply industries, such as pasteurizers and milking machines, had total sales of $21.4 million. Milk bottle production alone was valued at over $13 million.

"As to exports, the latest figures are for the year 1942. These reveal that U. S. exports of dairy products to other Americas totaled $6.3 million. Of this amount, Venezuela bought $3.1 million; Mexico, $611,000; Colombia, $334,000, and Brazil, $64,000.

"Our machinery and equipment manufacturers have also served as suppliers to the dairy industry in other lands. Figures available for 1941 on these three groups: cream separators; other dairy equipment and parts; and bottling, bottle-washing, etc., machinery and parts, show a total export value of $5.4 million.

"A further breakdown reveals that almost 80 per cent of this total was sold to the following countries, listed in the order of their importance: Canada, Mexico, Union of South Africa, Cuba, Chile, Colombia and Brazil."

Other Texts Distributed

DISA has also distributed to its members printed texts of two other talks prepared for its recent annual session but, like Dr. Taylor's, not given there. They deal with "Marketing Data" and with "Support of Efforts to Increase Milk Consumption" and were prepared respectively by Ralph L. Young, DISA's Treasurer, of The De Laval Co., and George F. Gallagher, President of Krim-Ko Co.

Milk Can Recommendation

The proposed simplified practice recommendation for milk shipping cans has been approved for promulgation, according to an announcement by the Division of Simplified Practice, National Bureau of Standards. The recommendation will be effective on expiration of Conservation Order M-200 of the War Production Board.

The recommendation applies to roll-bottom, hoop-bottom and solderless types of milk shipping cans of 5-gallons capacity and larger, manufactured for domestic use. Dimensions, weights and other details are included.

This program of voluntary simplification represents an effort by the industry to retain in the postwar period the benefits which became apparent as a result of the mandatory requirements of Order M-200.

Mimeographed copies of R208-45 may be obtained from the Division of Simplified Practice, National Bureau of Standards, Washington 25, D. C.

PAMD Officers Elected For 1945

At the annual Meeting of the PAMD Board of Directors, February 19, the following were elected as officers of the Association for the ensuing year:

President, Dr. R. C. Dayton, Rieck-McJunkin Dairy, Pittsburgh; Vice-President, Eastern Region, Dr. J. A. Webb, Abbotts Dairies, Philadelphia; Vice-President, Central Region, Floyd Mutchler, Lycoming Dairy Farms, Williamsport; Vice-President, Western Region, Robert G. Morgart, Johnstown Sanitary Dairy, Johnstown; Seretary, William J. Engle, Sunbury Dairy Products Co., Sunbury; Treasurer, A. M. Ryder, Ryder's Dairy, Lemoyne; Executive Vice-President, Benj. G. Eynon, Harrisburg; General Counsel, Daniels and Harter, Harrisburg.

MORE THAN DOUBLE PUMP LIFE

Building sustained efficiency into the mechanical structure of a pump was a problem solved by Peerless engineers.

Peerless engineering is *precision engineering* that permits *closer tolerances* which eliminate the customary vibration to an unusual degree. Thus, wear and tear are reduced; repair bills consequently are the lowest known.

The most vital parts of a Peerless Pump are *doubly* protected . . . by a *Double Seal* and *Double Bearings* . . . plus rugged construction . . . that more than double the productive life of the pump.

"Torture-chamber" tests in the Peerless hydro-mechanical laboratory disclose that the Peerless-featured, fully-enclosed impellers are little affected by sand-cutting and cavitation.

Capacities—10 to 220,000 gallons per minute

Peerless Distributors and Direct Factory Representatives are located in every State.

PEERLESS PUMPS

PEERLESS PUMP DIVISION
Food Machinery Corporation

TURBINE
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301 W. Ave. 26, Los Angeles 31, Calif. • 1250 Camden Ave. S.W., Canton 5, Ohio • Other Factories: San Jose 3, Fresno 16, Calif.

Butter Demand Slack

Consumer Call Light But Legitimate Wholesale Market Still Short and as Firm as Ever On Price

Chief feature of the butter situation continues to be decided slackness in consumer inquiry on the part of every type of user. Overall butter consumption has dropped to an extremely low level under the impact of high ration point value and generally acute scarcity of points. This appears particularly the case in large terminal points.

Hotels, restaurants and similar outlets here have long been down to only a fractional part of normal use, and the general public has been forced further to oleomargarine and other substitutes. More retail stores have had more butter on hand,—in many cases more than they wish. However, except in a relatively few instances chiefly among the independent groups nothing resembling a burdensome surplus has developed.

A definite influence bearing on the building up of more stocks than desired on the part of individual stores, chiefly independents, has been their reluctance to interrupt purchases from regular sources which have kept them going as well as possible during the pinch, because of fear that when civilian supplies again tighten they would be unable to secure any goods.

By and large, however, there is no logical reason under the existing condition of continued over-all shortage in the wholesale and jobbing market, why any individual purchaser should take on more goods that he needs.

Many Ahead on Set-Aside

At the wholesale and jobbing level the position price-wise continues just as firm as ever, and these outlets could readily absorb more butter without disturbing prices from maximum limits. Only a trickle of goods is being sold at the first receivers' margin, with great bulk of the trading still at ceiling limits on jobbers' mark-ups.

Only relatively moderate private storing has come into the picture as yet. Most receivers with any spare butter at all have been both anxious and willing to channel it to the Army purchasing agency in over-deliveries under the set-aside program. Army buyers have made continued strong efforts to get as much butter as possible delivered now, and credits are being granted against future set-aside commitments for any goods sold above present obligations.

Most prospects favor growing civilian supply pinch in April and May with the set-aside percentage sharply advanced. Production still is coming up only slowly and shows material losses compared with a year ago. There seems little chance that government officials have any near future intention of altering their dairy products price policies to bring butter into a more favorable competitive position to secure raw materials.

As anticipated, OPA contined butter at a 24-point-per-pound ration value for the April period. Oleomargarine, however, is boosted 3 points to 8 per pound because of expectation of considerable shrinkage in April supplies compared with March. What influence this might have in attracting more consumption back to butter cannot yet be gauged.

NAMED MARKET AGENT

Rochester, N. Y.—Appointment of J. Russell Fox, of Albany, as market agent under the War Food Administration for the six major milk sales areas of upstate New York was announced March 31. Mr. Fox, secretary of the State Milk Distributors, Inc., succeeds Abraham Pollack, who has been acting agent. The principal duty of the agent is allocation of milk supplies to dealers in accord with WFA orders.

Form New Affiliate

H. M. Stanley, Secretary of the State Grange, Elected President of New York Branch of ADA

Syracuse, N. Y.—Dairy farmers of the New York Milk Shed and adjoining states have formed the American Dairy Association of New York to join in ADA's nationwide program of advertising, merchandising, public information and research. The ADA of New York was organized March 14 in the Onondaga Hotel at Syracuse, at a meeting attended by representatives of producers throughout the area. H. M. Stanley, Skaneateles, N. Y., was elected president. One of the most active leaders in eastern agricultural activities, Stanley is secretary of the New York State Grange, chairman of the New York State Emergency Food Commission, and a member of the New York State Soil Conservation Committee.

Newell S. Hutchinson, Heuvelton, N. Y., a director of the New York State Farm Bureau Federation, was elected vice-president. A. D. Hakes, Pitcher, N. Y., president of the Otselic Valley Milk Producers Co-operative Association, Inc., was named secretary. Leon A. Chapin, North Bangor, treasurer of the Dairymen's League Cooperative Association and director of the Central Bank for Co-operatives, Kansas City, Mo., was named treasurer.

Directors Chosen

Elected directors were :Assemblyman Frank E. Snyder, Liberty, Pa., president of the Metropolitan Cooperative Milk Producers' Bargaining Agency, Inc.,; William Sadler, Blasdell, N. Y., secretary of the Niagara Frontier Cooperative Milk Producers' Bargaining Agency, Inc.; Howard Jensen, Melrose, N. Y., secretary and treasurer of the Hudson-Mohawk Milk Producers' Bargaining Agency; Herbert L. Seeley, Knoxville, Pa., director and member of the executive committee, Dairymen's League; Mr. Stanley,

BAD FLOORS?

MR. EXECUTIVE—Don't you worry about shutting down your plant when your cement floor needs repairing or resurfacing.

USE SYLVUS CEMENT at a trifling cost and no loss of production time, for either resurfacing or patching your floors. A handy man can do this quickly and easily.

SYLVUS CEMENT FLOOR PATCH dries in 12 hours—hard as iron, waterproof, acid resisting. Can be laid in refrigerating room without shutting off the refrigeration.

SYLVUS CEMENT is a scientifically prepared cement made up in colors and natural. Shipped in 250 or 350 pound drums. It will keep indefinitely without losing its efficiency.

In use by some of the largest dairies and ice cream companies

Sales Agents Wanted

SYLVANIA CHEMICAL CO.

8022 BROADWAY AVENUE - - CLEVELAND, OHIO

GIVE MORE

GIVE NOW

of the Grange; Mr. Hutchinson, of the Farm Bureau; Ernest C. Strobeck, Mascedon, N. Y., director and secretary, Dairymen's League; and Thomas E. McKeary, Marilla, N. Y., director, Dairymen's League, and director, Niagara Frontier Co-operative Milk Producers' Bargaining Agency, Inc.

Sybolt Tonkens, Trenton, N. J., represented the United Milk Producers of New Jersey, Inc., of which he is treasurer.

With establishment of the ADA of New York, producers of the area will take part for the first time in the aggressive, nation-wide, business-building program conducted through the agency.

While the unit was the twenty-first to be formally established, it actually brought ADA representation to around 25 states because many producers located in adjoining states will participate in the ADA programs through the ADA of New York.

Meanwhile producers were active from New England to Texas in organizing other ADA affiliates with indications reported from ADA headquarters in Chicago that ADA will embrace around 36 states by June, when dairy farmers annually mobilize their strength to back their coast-to-coast promotional and public understanding activities.

February Milk $4.18

Uniform Price to New York Producers of $3.38 Boosted by 80c Minimum Dairy Benefit Payments

New York Milk Shed producers received a uniform net return of $3.38 per hundred pounds for February deliveries from 49,144 individual dairy farms to plants serving New York City metropolitan area, according to the computation of Dr. C. J. Blanford, area market administrator. In addition to the posted price, dairy farmers are eligible to collect 80 cents a hundredweight in dairy production payments from the War Food Administration for a total return of $4.18.

The total income from February will come to $16,826,622.94 for a gain of 13 per cent over the yield from the deliveries of February 1944. The pool price of $3.40 of a year ago, in combination with WFA payments of 40 cents, brought producers a total return of $14,928,216.09. The increase for 1945 as compared with 1944 is $1,898,406.85.

The boost in income from a year ago is partly the result of higher WFA payments and partly because of an increase of nearly 3 per cent in the amount of milk delivered to the New York pool last month.

The average of 285 pounds a day was registered for 49,144 farms and built up a total of 392,696,170 pounds in the milk pool. The total receipts of February 1944, when, incidentally, 49,990 dairy farms were supplying pool plants, came to the lesser total of 382,282,738 lbs. The production gain, moreover, was tallied even though the number of pool producers dropped 846 from last year's total of 49,990.

Expect $3.22 Base in March

Income from March milk deliveries to New York approved plants was estimated at $21,103,000 by Dr. Blanford. The anticipated return was figured from the dual forecasts of a uniform price of $3.22 a hundredweight for milk of 3.5 per cent butterfat content and an intake of 515 million pounds of milk at 446 plants now forming the New York pool.

The foreseen rate of $3.22 is 6 cents less than the $3.28 paid farmers a year ago. However, with dairy feed payments from the War Food Administration for March 1945 at a minimum rate of 80 cents—a gain of 20 cents over the rate of 60 cents for last March, dairymen can expect to receive a total yield of $4.02. The total rate of a year ago was $3.88.

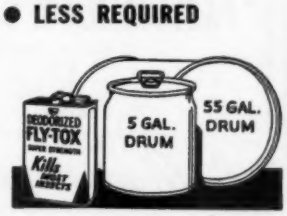
Every MILK PLANT Needs SUPER STRENGTH DEODORIZED FLY-TOX

Kills MORE Flies and Roaches!

- EXTRA KILLING POWER
- SAFE TO USE
- LEAVES NO ODOR
- LESS REQUIRED

ORDER NOW—SUPPLY LIMITED

Super Strength Deodorized FLY-TOX is made especially for use where food products are made or sold. It is available through Dairy Supply Jobbers and Drug, Grocery and Hardware Wholesalers. 1-gal. cans, 5-gal. drums and 55-gal. drums. If your nearest wholesaler does not have *Super Strength* Deodorized FLY-TOX, write us and we will see that you are supplied. Better order now. Only limited supplies available.



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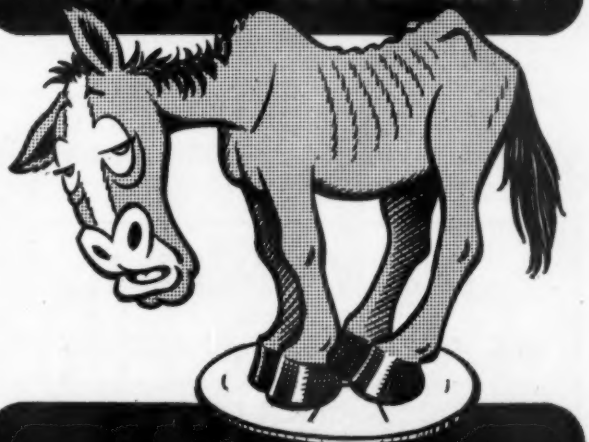

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ROBERT S. LEONARD CO.
2420 Broadway, Kansas City 8, Mo.
730 Washington Ave. No., Minneapolis 1, Minn.
1712 Laws Street, Dallas 2, Texas

DEVELOPS NEW BOTTLE CAP

Closure Made From Plastic — Transparent and Pliable

Robert L. Batchelor, eastern sales representative of the Lathrop-Paulson Company, in describing a new type bottle cap for which he has been granted a patent, states that the cap is made from a new, transparent, plastic material which has stretchability and which is chemically known as a copolymer. It is designed to be applied to the bottles from a roll of this material which is, while thin, quite tough and transparent. This precludes factory pre-forming and printing of the cap, as the flat cap underneath can be read easily through the material. A day's supply of cover caps can be carried on the roll in the machine.

The cover is heat-sealed and has two tabs hanging down on each side of the bottle. For quick removal it is only necessary to lift one of these tabs which breaks the seal and as the cover is put on in a stretched position, it immediately comes off cleanly from the bottle. It is said to be tamper-proof as well as being extremely easy for the housewife to remove.

Other claims made for this new cap is that the pliable material resists fracturing when ice is dumped on the bottles. The material comes in various transparent colors for easy identification of products; the cover can be applied to any finished bottle and may be used on cottage cheese glasses, etc.

The material for this cap will not be available in quantity until after the war as the entire output is being taken for the armed forces. However, a sufficient quantity is available for experimental work.

Manufacturers who may be interested in the development of a post-war machine for handling this cap may communicate with R. S. Batchelor at 152 West 42nd St., New York 18, N. Y.

SGT. R. L. ROBERTS

Indianapolis, Ind. (E.B.) — Word has been received here that Sgt. Russell L. Roberts, until entering the Army a supervisor for William H. Roberts & Sons dairy here, had died of bronchial pneumonia recently in England. It is believed his illness may have followed injuries he received when the B-17 on which he was flight engineer crashed. Following the accident he was removed to England.

Sgt. Roberts enlisted in the Army in December, 1942, but was not called to active duty until August, 1943. He left the United States last January. He was a graduate of Arsenal Technical High School here and of Purdue University, where he was a member of Sigma Nu Fraternity. He also was a member of the Masonic Lodge and Knights Templar among his fraternal activities.

He was the son of Guy L. Roberts, president of the dairy company. His widow and parents survive.

Statistical Review of the New York Market For March, 1945

CONCENTRATED MILKS

DATE	CASE CONDENSED Known br. (case)	CASE CONDENSED Other br. (case)	CASE EVAPORATED Known br. (case)	CASE EVAPORATED Other br. (case)	Unsw.cond. whole milk 40-qt. can 10% Fat	DRY SKIMMILK —Spray— Known br. Lb.	—Spray— Other br. Lb.	—Hot Roller— Other br. Human	—Hot Roller— Other br. Feed
Mar. 1	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	13½@14½	—@—
" 2	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	13½@14½	—@—
" 3	Saturday								
" 5	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	13½@14½	—@—
" 6	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	13½@14½	—@—
" 7	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	13½@14½	—@—
" 8	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	13½@14½	—@—
" 9	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	13½@14½	—@—
" 10	Saturday								
" 12	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@—	—@—
" 13	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@—	—@—
" 14	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@—	—@—
" 15	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@14½	—@—
" 16	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@14½	—@—
" 17	Saturday								
" 19	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@14½	—@—
" 20	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@14½	—@—
" 21	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@14½	—@—
" 22	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@14½	—@—
" 23	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@14½	—@—
" 24	Saturday								
" 26	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@14½	—@—
" 27	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@14½	—@—
" 28	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@14½	—@—
" 29	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@14½	—@—
" 30	6.25@6.40	—@—	4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14½@14½	—@—
" 31	Saturday								
T.& A.	6.25@6.40	—@—	*4.20@4.25	4.20@4.25	—@—	—@15½	15½@15½	14.37	—@—

N. Y. MILK PRICES

Basic prices for 3.5% milk in 201-210 mile zone in effect in New York City Area under the Federal-State Marketing Agreement used by all handlers in figuring returns for Mar.:

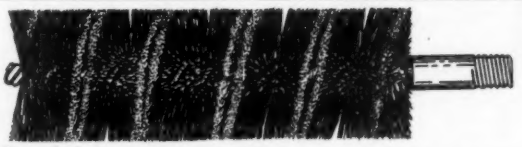
Class	Price per cwt.	Per point butterfat differential
I In Marketing Area	$3.70	.04
II Outside non-Federal	.20†	.04
II-A	2.55	.073
II-B	2.43	.069
II-C	2.306	.066
II-D	2.848	.067
II-E	2.206	.063
II-F	2.206	.063
III	2.742	.078
IV-A	1.796	.051
IV-B	2.295	.056
V-A	1.260	.....
V-B	.636	.....

†Plus uniform price for March, 1945.

Rail & Truck Receipts at N.Y.C.&Metrop. Area
(Statistics of U. S. Dept. of Agriculture)

1944-45 Milk	Fresh Cream	Frozen Cream	Fresh Cond. Milk
Feb. 3,363,536	54,173	4,288	21,720
Jan. 3,622,831	54,876	4,976	19,264
Dec. 3,637,230	56,495	4,734	17,948

DRY MILK
For
ICE CREAM MANUFACTURERS
Spray or Roller Process
BUTTERMILK POWDER
WHOLE MILK POWDER
For Human Consumption
Cars or Less
Marwyn Dairy Products Corp.
141 W. JACKSON BLVD. CHICAGO
Phone: Harrison 8688


E-Mac No. 100 BIS SANITARY PIPE BRUSH
PASTEURIZER & SANITARY PIPE BRUSHES
No. 100 —Standard BIS Mixture
No. 103B—All Phosphor Bronze Wire
No. 103S—All Nickle Silver Wire
(All Diameters From ¾" Up)
We Carry a Complete Line of Brushes Designed Exclusively for the Dairy Industry.
E-Mac DAIRY BRUSH CO., Reading, Pa.

NEW DAMROW BROS. PLANT

Expansion Calls for Modern Steel and Glass Construction

Preparations have already been made for the new extension to the Damrow Brothers Co. factory, at Fond du Lac, Wis., that will increase existing floor space by 40,000 square feet, and will be of modern steel and glass factory design.

Last of six houses being moved from site of new plant addition.

Damrow, widely known for its operations in manufacturing dairy and food processing equipment, finds the additional plant space necessary for producing their growing backlog of orders.

As a direct result of increased wartime activity in the dairy industry, more equipment has been required, including such items as Damrow Regenerative and "Vapor-Film" Pasteurizers, Can Washers, Cold Milk Filters, Holding and Storage Tanks and Conveying Systems.

THATCHER APPOINTMENTS

George A. Mellor has been appointed advertising manager of Thatcher Manufacturing Company, Elmira, New York, succeeding Norton B. Jackson.

The company also announces the appointment of Richard T. O'Connor to the position of purchasing agent, effective April 1.

Classified Advertising

RATES: "Position Wanted," 50c. Limit of 50 words; 2c for each additional word. All other advertisements, 5c a word ($1.00 minimum). Keyed ads, 15c extra to cover return postage. The name and address should be included in counting the words. All payments strictly in advance.

HELP WANTED

WANTED—FOREMAN for country receiving plant in South Central part of New York State. Must be familiar with New York City and New Jersey operations. Fine opportunity for proper applicant. Box 40, care this publication. 4-M

WORKING FOREMAN for a dairy plant manufacturing ice cream and milk products. Excellent post-war opportunity. State experience, age and salary desired. Box 41, care this publication. 4-M

OPPORTUNITY

An old, well-established, country bottling plant, located within 100 miles of New York, handling 1,000 cans of milk daily, requires the services of a Manager who, by experience and training, is qualified to take complete charge of this plant. This is a splendid opportunity for an efficient operator, where results will be appreciated and rewarded. Compensation is ample to attract the most capable individual. Address Box 39, care this publication. 4-M

WANTED—Man capable of acting as Superintendent of manufacturing plant doing volume of ice cream business from 500,000 to 750,000 gallons per year. This man would be located in small city of 40,000 population, central states. Please give experience, draft status, age. State salary expected, recent picture, if available. Give reason for desiring to leave present employment. Rare opportunity for right man. Box 44, care this publication. 4-M

Buy U. S. War Bonds

HELP WANTED

PLANT MAN, experienced in pasteurizing, bottling and making buttermilk. Good salary and post-war opportunity. The P. D. Cosmos Co., 401 West Main St., Springfield, Ohio. 4-M

WANTED—Man capable to act as Superintendent for 4 ice cream manufacturing plants, manufacturing 2,000,000 gallons of ice cream yearly. Also should have, but not necessarily, general knowledge of bottled milk business. Must understand handling of machinery and equipment in above plants. Please give experience, draft status, age. State salary expected, recent picture, if available. Give reason for desiring to leave present employment. Rare opportunity for right man. Box 45, care this publication. 4-M

CHEESEMAKER—One with past experience in making Italian types of cheese such as Ricotta fina latte e latte in 3 lb. cans; also whey cheese. State salary desired. Address Box 47, care this publication. 4-M-t.f.

CONDENSED-CREAM AVAILABLE

MICHIGAN CREAMERY desires to make connections with concern that can use mixed cars of condensed and cream and also powder the year around. Modern, stainless steel equipped throughout. For further details, address Box 46, care this publication. 4-M

CURD WANTED

PART SKIM CURD wanted, around 1 per cent b.f.—for the Italian trade, also fresh whey cheese. Write Box 48, care this publication. 4-M-t.f.

SKIM MILK WANTED

ALL YEAR PROPOSITION—to be manufactured into cheese. Address Box 42, care this publication. 4-M-5

DAIRY CHEMICALS

SANITATION SAFETY REQUIRES APPROVED, guaranteed cleansers such as Bram "K" (325 lb. barrels) for equipment, cans, etc., and Bram Bottle Sterilizer (425 lb. drums) for bottles, containers; order in 2, 4 and 12 Barrels for Economy. Representatives wanted. Bram Chemicals, 2107 W. Erie Ave., Philadelphia 40, Pa. 4-M-2

EQUIPMENT WANTED

WANTED—Steam jacketed copper kettles from 60 to 100 gallons capacity. Must have good or fair tinning. State price in reply to Box 49, care this publication. 4-M-t.f.

T. JOHNSON CO., INC.

Manufacturers of Quality Tight Cooperage since 1877.

We Specialize In Barrels For Condensed Milk. Prompt Service.

Send us your inquiries.

1046 W. 38th St., Chicago, Ill.

OHIO

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are

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HI-QUALITY—DEPENDABLE

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OHIO BOTTLE CAP CO.

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EQUIPMENT WANTED

WANTED — A good used Viscolizer or homogenizer. Advise size, price and condition. Box 43, care this publication. 4-M

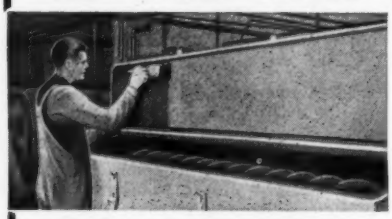
EQUIPMENT FOR SALE

FOR SALE—G-7 and G-100 Cherry-Burrell Nu-Line Fillers, s.s. bowls; Model "C" Mojonnier Vacuum Filler, s.s. bowl; Type "L" Milwaukee Filler; 4, 6, 8 and 12 Wide Soaker Type Bottle Washers; 8 ft. Combination Direct Expansion (Methyl) Cooler 48—1 inch tubes; Von Gunten Filter, 17x25 inch; 12,000 lb. Peerless Glass Coated Filter; 1,000 lb. Two Compartment T. C. Weigh Can; Can Washers, 3 and 6 per minute; 4½x6 Davidson Bronze Plunger Pump, Reeves Drive and 1½ H.P. motor; 330 Gallon Pfaudler Glass Lined Holding Tanks; Bronze Head Homogenizers or Viscolizers ranging in sizes from 50 to 400 gallon in capacity; 42 inch Copper Vacuum Pan; No. 30 and No. 70 De Laval Separators. Write or wire your requirements. Lester Kehoe Machinery Corporation, 1 East 42nd St., New York 17, N. Y. Telephone—MUrray Hill 2-4616. 4-M

EQUIPMENT FOR SALE

all New York City approved; Milwaukee type "L" bottle filler, stainless steel bowl; 250 gallon C. P. Homogenizer, bronze head, 125 viscolizer bronze head, complete with all accessories and motors; three 300 gallon Pfaudler glass-lined pasteurizers complete with space and foam heaters, motors, etc.; McKinley can washers with cover replacers, 6 per minute, one 8 per minute; C. P. 5x5, Wolf 7x7, Sterling 5x5 compressors complete with all accessories and motors; one 3,200 gallon, one 3,500 gallon oval stainless steel truck tank with Fruehauf Trailers; 225 gallon R. G. Wright pasteurizer, tinned copper with water pump and motor; 1,000 lb. De Laval milk seporator; No. 60 De Laval Cream Separator, complete with motor and extra bowl; 50 h.p. Ames horizontal high pressure boiler; two 8,500 lb. tinned steel cheese vats—wood frames, new liners, never used since rebuilt; 1.000 pound hanging Toledo dial scale; 20 horsepower Leffel Scotch marine boiler and stack; 300 gallon Fort Wayne stainless steel pasteurizer, motor driven; used Binks spray cooling tower, 100 gallons per minute; 30 ton metal cooling tower with all pipes; Meyer Dumore bottle washers, 8 and 12 wide come-back

RETIN VATS and TANKS with CROMATIN



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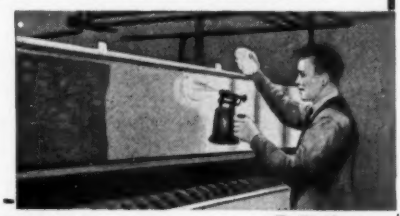
Just mix CROMATIN powder with water and apply with brush, like paint.

2nd: USE BLOW TORCH AND WIPE

CROMATIN makes a smooth level surface fused to metal. Wiping produces lustre.



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☐ Send C.O.D.
☐ Bill 2%—10 days.

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FOR SALE — COUNTER Ice Cream freezer, mix storage compartment, 1½ horsepower Servel unit. Good condition. Henry Freeman, Concordia, Kansas. 4-M

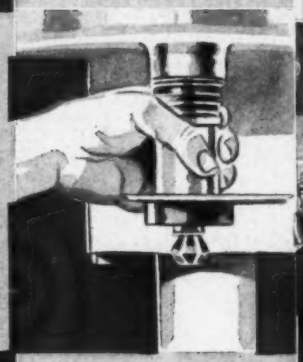
FOR SALE—ONE CREAMERY PACKAGE 1942, six wide, soaker type bottle washer, No. E-403 Model E, 38-48 bottles per minute, automatic infeed and discharge, automatic temperature control; two Creamery Package, 6 foot external tube milk cooler, 3 sections, 12 one inch tubes each, stainless steel distributing pipe, trough and covers; one Chester Dairy 12 foot internal tube cooler, 8 one inch tubes; one Peerless No. 12 glass-lined milk filter. Arrowhead-Shoemaker Dairies, Inc., Bridgeton, N. J. 4-M

FOR SALE — SWEETENED CONDENSED Case Goods Packaging Machinery. One Model A "Burt" Labeler, one Model PCE "Burt" Case Packer. Both of these machines are brand new. Golden Valley Creamery, Inc., Newman, Calif. 4-M

FOR SALE—Three 3,000 gallon Pfaudler glass-lined horizontal insulated milk storage tanks; twelve wide Multi-soak bottle washer, double end, 72 bottles per minute, complete with case washer, case and bottle conveyor, type, factory rebuilt; 50 horsepower upright boiler; 12 tube 8 foot 1 inch I. T. Cooler; 8-wide Heil bottle washer, comeback type; York heat exchanger, stainless steel plates; Peerless deep well pump, 50 gallons per minute at 150 feet; 10 ton Ice Field complete; 1,200 lb. Crane butter churn, excellent condition, belt drive; Pennsylvania centrifugal water pump with 7½ horsepower motor, 200 gallons per minute; Worthington centrifugal high pressure water pump with 10 horsepower motor, 100 gallons per minute; steam driven Worthington double acting water pumps, 3½x2½x4 inch; surface coolers, weigh cans and receiving tanks, all sizes; steam driven power house equipment with two 96 K.w. generators complete; 3 Stainless steel Cherry-Burrell Model SEMS 150 gallon milk or ice cream mix pasteurizers; U. S. brine ice cream freezer, 80 quarts; Stainless steel 30 gallon surge tank with cover, automatic float and Mercoid switch; Mojonnier overrun tester; 1,000 lb. Doering butter printer; Cherry-Burrell Nu-Line in-the-case bottle washer; Oakes and Burger 200 gallon stainless steel pasteurizers complete; Creamery Package Type C Rotary bottle filler. Sam Edelman, 321 Broadway, New York 7, N. Y. WOrth 2-4975. 4-M

"See that milk level, Jim — 1/8" below the cap seat. And it's the same on every bottle— 2 quarts, quarts, pints or cream bottles. Accuracy saves a lot of milk every day, brother."

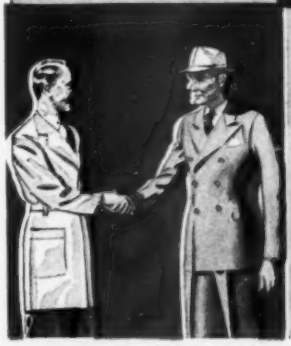
"And here's the filling valve and the end of the vent tube. When the bottle is filled, the vacuum in the bowl immediately draws all milk in the vent tube up into the bowl. There is no loss from dripping."



"You too should make GRA-VACS Your post-war bottle fillers"

"Here's the result of that vent tube operation. See how that bottle and all the others are not only filled exactly to the correct 'dry cap' level but also notice the complete absence of drip. Even after two years operation and with valves worn there is no loss from drip. That means a lot of savings, especially on cream."

"Watch that broken bottle, Jim — and note that the Gra-Vac valve doesn't put even a drop of milk into it. It won't fill bottles with chipped lips, either. And that saves quite a bit of milk, too."



"Frank, I like everything about this Gra-Vac of yours and, I want to investigate further. I'll call the Cherry-Burrell man as soon as I get back home, and ask him to estimate how much I can save in my filling operation by installing a Gra-Vac."

"As one milk dealer to another, Jim, this Gra-Vac filler is one of the best investments I ever made. It paid for itself long ago in time, pay-roll and milk saved and it's still as good as the day I got it. If you believe as so many do that there will be little if any decrease in post-war wages or post-war demand for milk and cream why don't you consider taking advantage of the savings possible with the Gra-Vac. Let me show you why — "

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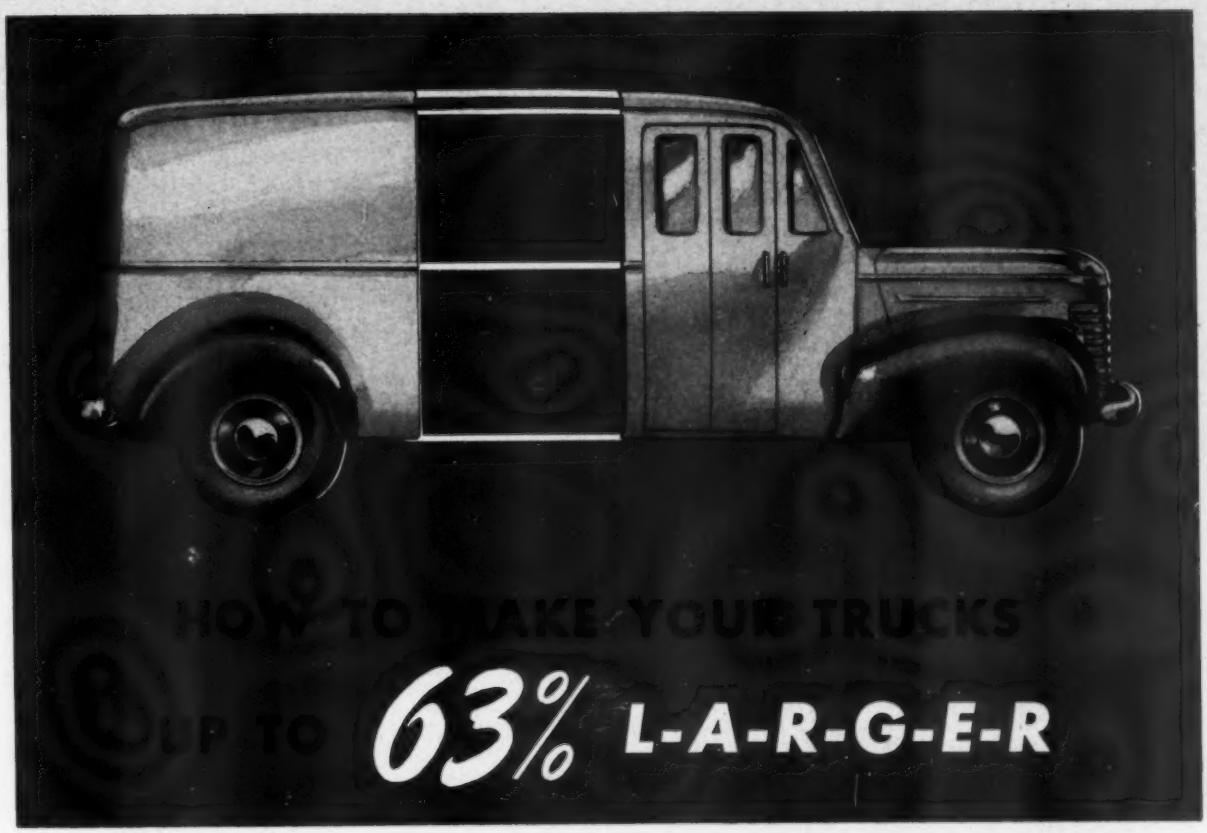

Thatcher T-SQUARE milk bottles increase delivery truck capacity up to 63% over round bottles

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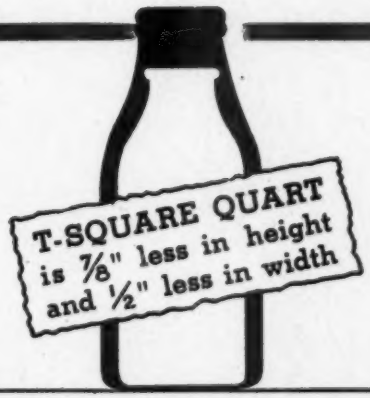
Ask to see the Thatcher FACT FILE. See for yourself how your dairy will benefit by using Thatcher T-SQUARE milk bottles. There is a Thatcher representative near you . . . . Let him tell you about the compact Thatcher T-SQUARE milk bottle.



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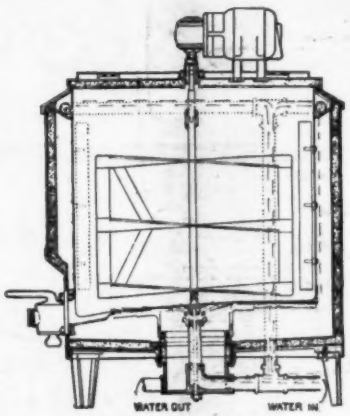

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